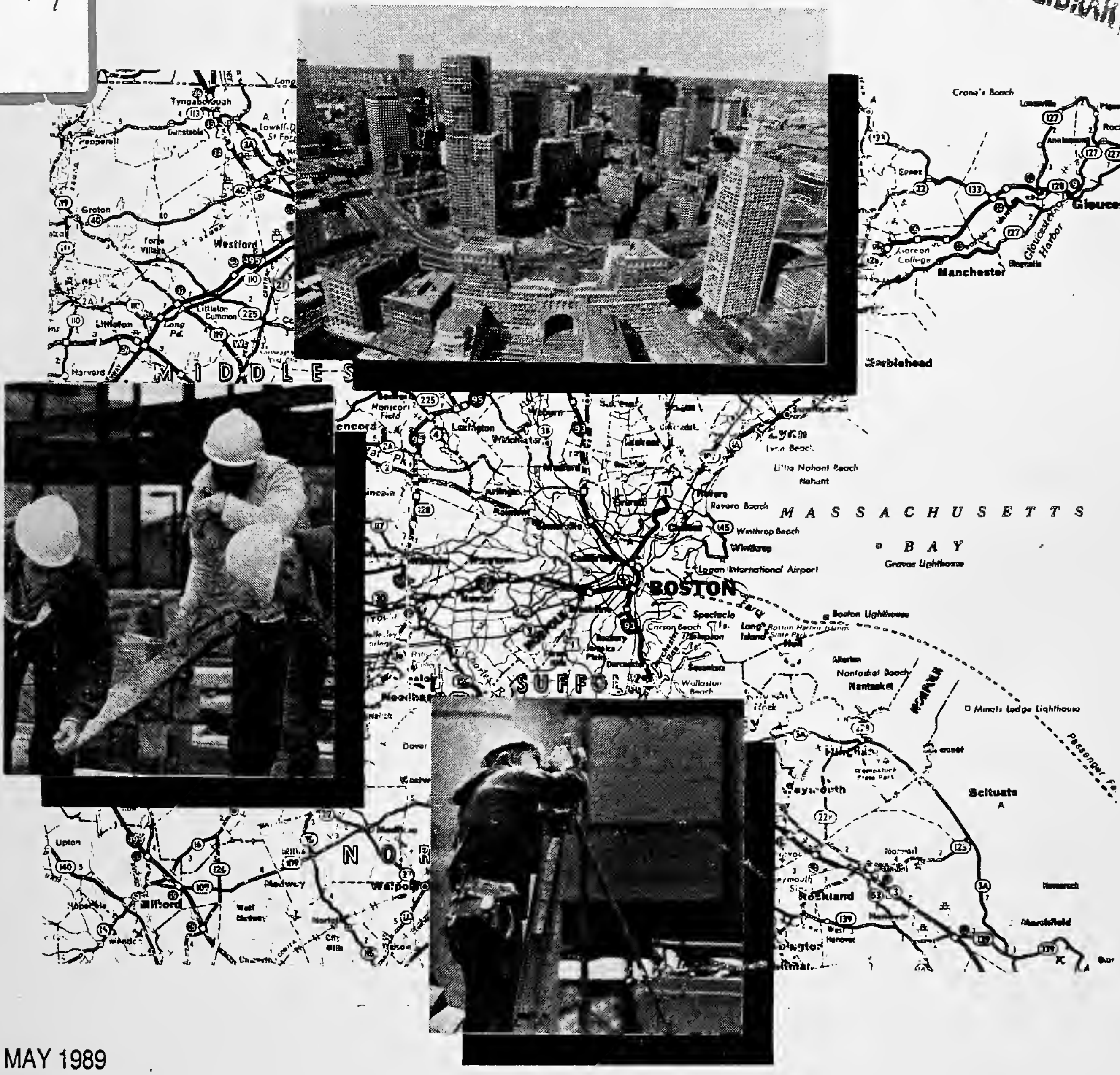
BUILDING A NEW REGIONAL ECONOMY

MATCHING FUTURE OPPORTUNITIES WITH CURRENT NEEDS



MAY 1989

City of Boston
Raymond L. Flynn,Mayor

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CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR
RAYMOND L. FLYNN

Dear Friends:

In the last 5 years, Boston has enjoyed a level of economic success unparalleled in our recent history. Our success as a city can be measured in many ways — unemployment levels among the lowest in the country, a booming downtown economy, and neighborhood revitalization projects all over the city. This boom has also fueled the economy of the metropolitan region, the state and New England. Today, Boston is a national model of what urban America can, and should be.

Boston's economic success, however, is not shared by all its citizens. The low overall unemployment numbers in Boston mask both high unemployment, and even higher, underemployment, rates in certain neighborhoods, and among certain segments of our population. These problems of opportunity, in turn, contribute to "pockets" of poverty in many parts of Boston, some of which are adjacent to our thriving downtown. It is in these same areas that the related problems of inadequate housing, drug abuse, crime and teenage pregnancy exact the heaviest toll on Bostonians, particularly our children.

The greatest challenge facing the city of Boston is that of extending our economic success to those citizens who do not share in our current prosperity. The means through which we can meet this mandate is to link opportunities for good jobs in Boston's economy to those individuals most in need.

This report addresses one major source of job opportunities soon to be available to residents of Boston and other communities in the Commonwealth — the Central Artery/Third Harbor Tunnel Project. The project is among the largest ever undertaken in Boston or Massachusetts, and between 1989 and the end of the century it will require an average of 2,660 full-time workers to complete construction. Who is employed in those jobs, and who receives the apprenticeship training opportunities generated by them, are matters as important to Boston as the construction project itself.

The analysis contained in this report demonstrates that under the Commonwealth's current "Building Opportunities Project", the number of apprenticeship opportunities for Boston residents fails to utilize fully the economic opportunity of these construction projects. In view of this finding, the City of Boston offers in this report numerous recommendations for improving the "Building Opportunities Project" plan, as well as for other employment-related aspects of the Central Artery/Third Harbor Tunnel Project.

In the months and years ahead, the jobs created by this "megaproject" will be filled, and construction will inevitably be completed. The success of these "megaprojects" will be measured not only by the degree of technological skill and engineering competence, but by the ability to use the project to build a labor force and population to meet the needs of the state and regional economy in the 21st century.

Raymond L. Flynn
Mayor of Boston

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Executive summary

The Depression of Boston's Central Artery, the construction of the Third Harbor Tunnel and the Clean-Up of Boston's Harbor represent unprecedented economic opportunity for Boston and the Commonwealth of Massachusetts.

The projects will provide the critical infrastructure for Boston to continue its role as the engine of the Massachusetts economy; the State's center for jobs, revenue and services.

These megaprojects will create an average of 5,510 full-time jobs in construction and related fields between 1990-1999.

The Central Artery/Third Harbor Tunnel Project alone will create an average of 2,660 jobs over the life of the project. Of these 1,456 jobs will be in the "crafts" fields, and one-sixth will be for apprenticeship positions.

The total number of apprenticeship positions over the life of the project is estimated to be 839.

The State's Building Opportunities Project currently targets three groups (women, minorities and impacted neighborhoods) to each receive 25% of apprenticeship positions. This program will yield 352 apprenticeship jobs for Boston residents. This low yield is due to limited targeting and the potential effects of double-counting.

The State's Building Opportunities Project does not address the issue of the health of the regional economy. In the City of Boston alone, there are more than 6,000 persons between the ages of 16 and 29 who are out of work; nearly two-thirds of these individuals reside in neighborhoods impacted by the Central Artery/Third Harbor Tunnel Project or other neighborhoods in which average income is less than twice the poverty level. The program does not go far enough in targeting these new job opportunities to the areas where unemployment is highest. The City of Boston has a series of recommendations to help match the opportunities presented in the Central Artery/ Third Harbor Tunnel project to those regions where jobs are most needed.

Recommendations

The analysis contained in this report confirms the significant economic potential of the combined Commonwealth of Massachusetts and City of Boston "megaprojects." The report also points out that significant levels of poverty and underemployment exist within neighborhoods of the City of Boston, as well as surrounding communities, and that the megaprojects represent unprecedented opportunities through which these problems may be addressed.

With respect to the Central Artery/Third Harbor Tunnel Project in particular, the report identifies the fact that a limited number of apprenticeship positions in crafts fields will be created over the life of the project. The report concludes that the Commonwealth of Massachusetts' "Building Opportunities Project" plan for distributing these limited opportunities will not target sufficient numbers of apprenticeship positions to areas in which severe underemployment exists.

Under the Commonwealth's plan, the City of Boston estimates that approximately 839 apprentices will be hired over the life of the Central Artery/Third Harbor Tunnel Project. Considering the approximately 210 apprenticeship positions (25% of 839) which will be targeted to residents of impacted Boston neighborhoods and an estimated number of women and minority apprenticeship positions to be gained by City of Boston residents (with double-counting expectations factored in), the City of Boston can expect to receive approximately 352 (42%) of the total apprenticeship positions. Viewed in comparison to Boston's at-risk population of 4,039 unemployed, 16- to 29-year-old persons living in high-impact and/or double-poverty neighborhoods, the Commonwealth's plan would address the employability needs of one in twelve at-risk Boston residents, or 8.7 percent of the at-risk population.

In the alternative, the City of Boston recommends:

1. the addition of a fourth 25% target group, comprising "economically disadvantaged youth, between the ages of 18 and 25;"

2. the elimination of double-counting, by category of preference of participants in the apprenticeship program; and

3. the addition of a secondary preference tier within each of the four 25% target groups for residents of double-poverty neighborhoods.

Under this proposed plan, the City of Boston estimates that 537, or 64% of total apprenticeships under the "Building Opportunities Project" will go to residents of the City of Boston. This plan would address the employability needs of nearly one in eight at-risk Boston residents, or 13.2% of the at-risk population.

In addition, the City of Boston recommends:

4. the application of the 25%/ women/25% minority/25% impacted neighborhood residents/25% economically disadvantaged youth targets to off-site trainee positions;

5. the formal extension of the City's policy recommendations for apprenticeship and off-site opportunities to the Harbor Clean-Up projects; this could result in between 800 to 900 additional jobs for Boston residents;

6. specific financial commitments of at least 5 years from the Commonwealth for funding pre-apprenticeship training and training for off-site positions;

7. the establishment of formalized links between the "Building Opportunities Project" and City and State vocational education systems;

8. the extension of the apprenticeship targets to private development "megaprojects" in the City of Boston; and

9. formal agreement between the City of Boston, the Building Trade Union and the Commonwealth for joint City-State-Union verification and monitoring of apprenticeship participation and contractor hiring commitments.

The combined employment opportunities that would result from the adoption of the City's plan would reach almost 30% of the at-risk population. The megaprojects, taken together with private construction projects, can provide job opportunities for more than half of the unemployed youth in the City of Boston. Thus, City and State have a chance to help people break what has become, for some, an endless chain of family poverty and to provide better futures for thousands of needy young men and women—if, and only if, public policies are changed and directed to these ends.

INTRODUCTION: Matching Future Opportunities with Current Needs

The depression of the Central Artery, the construction of the Third Harbor Tunnel and the clean-up of Boston Harbor together represent the largest public works undertaking in the history of the City of Boston and the Commonwealth of Massachusetts. The combined $10.3 billion in public investment in these "megaprojects" is equal to nearly half of Boston's annual gross economic product. It is also a level of investment greater than the gross national products of many nations of the world.

The scale and magnitude of the megaprojects will generate a tremendous demand for various types of labor. Over the ten-year lifespan projected for each of the projects (1990-1999), more than 5,500 workers will be employeed annually, with between 6,500 and 8,000 employees required during the peak years of 1991-95. Combined, the megaprojects and projected public/private investment in the City of Boston will create a large demand for labor that will, in turn, require the training and hiring of new workers.

As Boston and the Commonwealth mutually undertake these public infrastructure projects of unprecedented size, complexity and cost, there remain too many Bostonians without the skills necessary to earn their way out of poverty, to afford decent housing, or to provide adequate health care, nutrition and clothing for their families. For many, the solution to poverty and its related problems may be found in a single word — opportunity.

The megaprojects present unparalled economic opportunity through which Boston, as the engine of the Massachusetts economy and the hub of the New England region, can grow and prosper well into the 21st century. The jobs that the megaprojects generate also present a practical opportunity to address Boston's concentrations of poverty; to ensure that individuals can grow and prosper through economic self-sufficiency; and contribute to the growth of the region's economy.

The challenge of the megaprojects is not merely to build bridges and tunnels and to improve our physical environment. The challenge also is a humane one — to match economic opportunity and need in order to improve our human environment. It is the challenge to truly maximize the investment of public resources by ensuring that part of that investment is made in human resources. The question is if we do not do this now, then when will we? The answer may well be never.

The Central Artery/Third Harbor Tunnel Project

This report will focus on the job opportunity potential of the Central Artery/Third Harbor Tunnel Project - one of the two public megaprojects Boston and the Commonwealth will undertake over the course of the next decade. A subsequent report will address the same job opportunity potential of the Boston Harbor Clean-up Project.

IN CAPSULE: The Commonwealth's Building Opportunities Project

The Central Artery/Third Harbor Tunnel Project will create an average of 2,660 full-time equivalent man-year jobs through the end of this century. These jobs are categorized generally as "off-site" and "on-site" positions. Within the "on-site" category, the principal sub-categories are "laborers," "crafts," and "crafts apprenticeships." Each of these sub-categopries is further broken down by specific functions and skill areas.

In April 1989, the Commonwealth of Massachusetts announced a plan for targeting apprenticeship training opportunities associated with the Central Artery/Third Harbor Tunnel Project. The Commonwealth's plan, entitled the "Building Opportunities Project," addresses only those jobs which result from the creation of apprenticeship opportunities. The Commonwealth alternately characterizes the apprenticeship positions as representing "one-to-five" or "one-in-five" of workers on the Central Artery/Third Harbor Tunnel site. This distinction in terms, although of marginal analytical impact, will have a significant impact on the actual numbers of apprentices working on the construction project. The "Building Opportunities Project" plan does not address on-site laborer positions or off-site positions with engineering and construction firms.

Within the "Building Opportunities Project" plan, the Commonwealth has established a preference system for determining who gains access to the majority of the apprenticeship positions created by the construction project. The plan calls for "setting targets for participation of apprentices at 25% women/25% minorities/25% residents of neighborhoods impacted by the Central Artery/Third Harbor Tunnel." The plan does not address the potential for double-counting of apprentices who may fall into more than one of these preference groups.

Boston's Role In The Regional Economy:

As the economic center of New England, the City both affects the economic trends of the region and is influenced by regional patterns of growth and change. Since 1976, the City's economic resurgence has been evident in events of the region, state and metropolitan area.

In the years since 1976, New England has surpassed the national average in several measures of economic growth according to data compiled by the U.S. Bureau of Labor Statistics and the U.S. Bureau of Economic Analysis. Employment in New England grew 32.3% from 1976 to 1986, compared to a 26% gain for the nation. The regional unemployment rate fell below the nationwide rate in 1978 for the first time since 1967, and has continued at a lower level since then. The 1982-1986 economic recovery brought an increase of 1,011,000 jobs, a 15.4% employment growth rate in New England compared to a 12.1% growth rate for the nation. The 39% increase in total personal income in New England between 1983 and 1987 was the largest gain of the nine census regions.

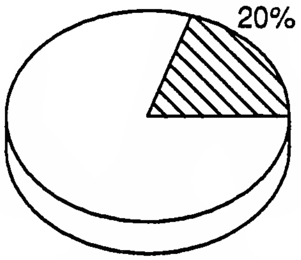
The economic performance of Massachusetts has been consistent with regional trends. Employment increased by 31% in Massachusetts between 1976-1986. In total personal income growth, Massachusetts ranked sixth among all fifty states for the 1982-1986 period with a 10% annual rate compared to the national rate of 8%. During 1987, Massachusetts' total personal income grew by 7.6% topping the U.S. gain of 5.8%. The 1987 unemployment rate in Massachusetts declined to 3.2%, the lowest since before 1970 and the lowest rate among the eleven largest industrial states.

The economy of the Boston metropolitan area has also done very well. Over 400,000 jobs were created in the decade ending 1986 as the high technology and services sectors grew rapidly. Metropolitan area employment continued to grow in 1987 as the jobless rate dropped to 2.7%, the lowest among the thirty-four largest U.S. metropolitan areas. There has been concern among economists over a possible regional labor shortage.

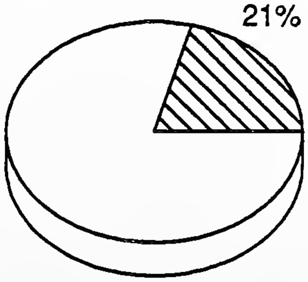
With a population of 573,600 and 620,338 jobs in 1987, the City had the second highest ratio of jobs to population of any of the nation's 34 largest cities, surpassed only by Washington, D.C.(according to U.S. Census data). The high ratio of jobs to population indicates that the City provides a direct source of employment and income for an area which extends beyond its borders and the Boston metropolitan area.

Between 1950 and 1987, the City's employment structure experienced substantial change. The City's service industries, including transportation, communication, public utilities, finance, insurance, business services and professional services, expanded their share of the City's total employment from

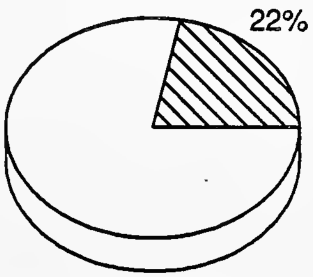
Boston as the Economic Center of Massachusetts



Massachusetts' Jobs Located In Boston



Massachusetts' Gross State Product Produced In Boston



Massachusetts' Tax Revenues Generated In Boston

Source:Boston Redevelopment Authority Research Department
U.S. Department of Commerce, Bureau of Economic Analysis

32% to 1950 to 60% in 1987, while the share of total employment in manufacturing and trade declined to 6% and 14%, respectively.

Employment in service industries has been the most rapidly expanding sector of national and New England employment. The growth of high technology, finance, business and professional services, higher education and medicine has made the New England and City economies more diversified and less vulnerable to significant cyclical downturns.

Total employment in the City increased by 109,439 between 1976 and 1987 as growth in a broad range of service and finance industries more than offset decreases in manufacturing and wholesale trade industries. The City's employment has grown at an annual rate of 1.5%, an increase of nearly 12,500 jobs annually since 1982.

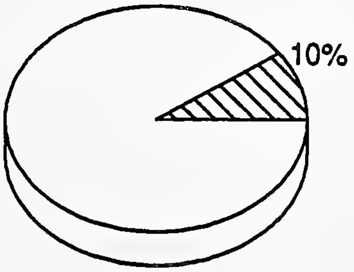
Unemployment in the City declined substantially from the peak level in 1975 of 12.8% to 6.1% in 1980, when it went below the national average. Since then, the City's average annual unemployment rate has remained well below the national rate. After rising through 1982, the City's rate fell to 4.4% in 1986 and 3.2% in 1987. In March 1988, the City's unemployment rate was 3.4% while the national rate was 5.9%. A survey of City households conducted in spring, 1985 reported a minority unemployment rate at double the City average and a youth unemployment rate at triple the average for the City, a pattern experienced by many of the country's urban centers.

The City's resident labor force declined during the 1970's but has increased since 1980. In contrast to the 12% decline in population between 1970 and 1980, the City's labor force (those residents age 16 and over available to work) declined by only 4%. The difference in these rates of decline was attributable to the fact that the decline in population was concentrated in the under-16 age group. Since 1980 both the increase population and the maturing of youth has caused the labor force to grow. The composition of the labor force changed further with a net increase of over 35,000 persons in the 25 to 34 age group, primarily in the professional, technical and managerial occupations.

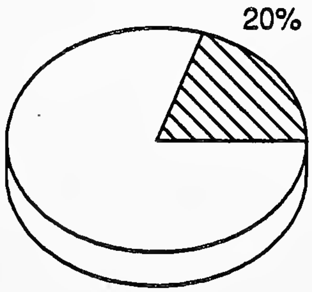
General improvement in the educational attainment levels of the adult population continued throughout the 1970-1985 period. The percentage of the population that was 25 and over and that had completed four or more years of college more than doubled from 10% to 22%. This change, in part, reflected the trend for an increasing percentage of graduates of the City school system to seek higher education. This percentage increased from 25% in 1960 to 36% in 1970, 44% in 1977 and 54% in 1982.

The City's per capita income, $17,227 in 1986, was 17.7% above national per capita personal income. A historical summary of per capita income shows that, from 1980 to 1986, the City's per capita income grew at a rate greater than that for the nation, a notable improvement compared to the 1970-1980 period when it rose at a relatively slower rate. Although the City's per capita income remains below those for the Commonwealth and the metropolitan area, it rose at a faster

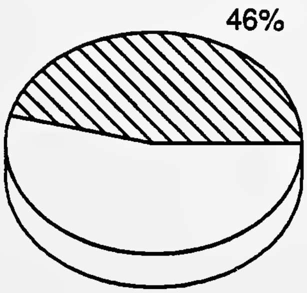
Boston's Share of Massachusetts' Poverty, Minority Population and Assisted Housing



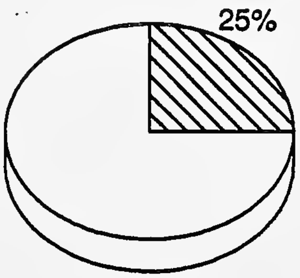
Massachusetts' Population Residing In Boston



Massachusetts' Poverty Population Residing In Boston



Massachusetts' Minority Population Residing In Boston



Massachusetts' Assisted Housing Located In Boston

Source: Boston Redevelopment Authority Research Department
U.S. Department of Commerce, Bureau of Economic Analysis

rate than those for the nation, region, state, and metropolitan area between 1982 and 1986. The City's median household income rose concurrently, from $7,835 in 1970, to $12,530 in 1980 and to $19,250 in 1985.

The latest information indicates that average annual wages earned, by place of work, have been consistently higher in the City than in the Boston metropolitan area and the Commonwealth in each of the years of the 1980-86 period. This would seem to contradict a widely held notion that the City, with its relative concentration of employment in a broad range of service industries, would be a lower wage area. Except for manufacturing and wholesale trade, wages in the City were higher for all major industry types. For all industries combined, the City's average wage level $20,354) was 8% greater than that in the metropolitan area ($18,770) and 16% greater than the average state wage level ($17,610). The data indicates that the City's mix of industries and occupations is of a higher grade - particularly for financial, insurance, professional and business services.

During the years 1977-1987, the cost-of-living rose 86% in the City, while the national index increased 88%. From May 1987 to May 1988, the cost-of-living in the Boston area rose 6.8% compared to 3.9% for the nation. The impact of lower property taxes and interest rates since 1982 reduced traditionally high housing costs initially but strong demand has caused rapidly increased prices, higher rents and lower vacancies since 1983.

Boston's educational and medical institutions are important components of its economy. Educational and medical institutions provide employment opportunities for residents of the City and its metropolitan area. In addition, expenditures by the institutions' students, patients and visitors are important to the City's trade and service sectors.

The City has 31 hospitals, including Massachusetts General, Boston City and University Hospitals and the Tufts New England Medical Center. These hospitals have 47,862 full-time jobs and a payroll of over $1 billion. Of the nation's top 11 hospitals in National Institute of Health-funded research, nine area located in Boston. The City is also the home of the medical and dental schools of Harvard, Tufts, and Boston Universities. In addition, the City has 30 local community-based health centers, of which six are affiliated with Boston City Hospital.

There are 65 colleges and universities in the Boston metropolitan area, at which approximately 250,000 students are enrolled. When trade and vocational school are taken into account, the metropolitan area has over 100 institutions of higher education. The City has 36 universities, colleges, and community colleges as well as 26 career/technical schools which combined have an enrollment of more than 125,000 students. Northeastern University is the largest private university in the nation while Boston University is fourth. The City has more students in relation to population than any other major U.S. city.

The City has experienced a healthy growth in tourists and visitors, especially since the Bicentennial Celebration of 1976. In 1987, an estimated 8.6 million people visited greater Boston, up 6.2% from the 8.1 million visitors in 1986 and a 28% rise from the 6.7 million visitors in 1983. These visitors, measured by the Greater Boston Convention and Visitors Bureau, as people who have travelled at least 100 miles to get to the City, had a total economic impact upon greater Boston of $5.5 billion in hotel accommodations, meals, entertainment, shopping, transportation, and other services. In 1985, the last year that tourists data was compiled for the City exclusively, the statistics showed that 80% of all visitors to greater Boston also visited the City.

A growing component of total visitors to the City are convention delegates. In 1987, 940,000 conventioneers attended functions in the City, a gain of 5.5% from 891,000 delegates in 1986, and a 42% increase from the 662,000 attendees in 1983. According to national figures, the City ranked as the eleventh busiest convention city in the nation in 1986. The completion of the enlarged and renovated Hynes Convention Center in Back Bay (1988), together with the World Trade Center on the waterfront (1986) and the Bayside Exposition Center on Columbia Point (1985), gives the City three facilities with a combined capacity for well over one million people. The City has started serving major convention events as evidenced by two recent events at which there were over 48,000 attendees at each event.

Air travel passengers arriving at and departing from Logan Airport increased at an annual rate of 6% between 1970 and 1986. In 1987, Logan Airport served 23.3 million passengers (up 6% from 1986). The airport, located just three miles from downtown Boston, is the tenth busiest airport in the United States.

During the last two decades the public and private sectors carried out a major expansion of capital construction and investment activity that was instrumental in the transformation of the City's economic base. Private commercial development investment has added over 16 million square feet to the physical inventory of the City since 1975, or five times the amount built in the previous 35 years. The ten-year period brought a record amount of new office space, substantial increases in the number of hotel rooms and expansion of medical and educational facilities. Commercial development, which peaked in 1984, continues at similar levels. The level of housing construction, responding to the tight housing market and strong demand, grew in 1986 and 1987. Private investment scheduled for completion during 1988 will mark an all-time high.

Because of the growing importance of the services sector to the City's economy, the trend in office space construction and utilization is an appropriate index of the City's economic activity. The City currently has 49 million square feet of office space of which 35 million is Class A, 10 million in Class B or C, and 4 million is owner-occupied non-competitive. From 1977 through 1983 local office occupancy surveys reported a consistent decline in vacancy rates from 5.8% in 1979 to 2.0% in 1983. With the addition of over 3 million square feet of office space in 1984, the vacancy rate rose to 11.5% by year end 1984, although net absorption at over 2 million square feet was the highest in a

decade. From 1985 through 1987, demand of over 2 million square feet annually outpaced office completions sending vacancy rates back down to 5.2% by year end. Average rents for Class A space are now $35.00 per square foot.

New office construction scheduled to be completed during 1988-1991 is expected to add over 6.7 million square feet of office space in 19 buildings. In addition, about 1.0 million square feet of downtown rehabilitated buildings and new office buildings outside of downtown will be completed during this period. The outlook for office vacancy rates is for a rise close to 9% through 1989, followed by a modest decline.

The City lies within the sixth largest retail market in the nation. Within the City $3.6 billion of retail sales were recorded in 1985, constituting 20% of metropolitan sales. Downtown Boston has six million square feet of retail space matched by another six million located in the neighborhoods. Approximately 3,200 retail stores are located in the City.

Boston's growth contributes significantly to the Massachusetts "miracle". Recently issued reports of the U. S. Bureau of Economic Analysis show that rising levels of personal income per capita in Massachusetts (and in the Boston metro region, and the City of Boston) are widening the gap with the lower national average. From 1982 to 1987, State per capita income rose from 11 percent above the national average to 24 percent. With an annual growth rate of 8.5 percent, the State was second highest (all in comparison with a 6.2 percent growth rate in per capita income for the nation as a whole in the 1982-87 period). This raised the level of Massachusetts' per capita income to third highest in rank in 1987. The Boston Metro Region and the City of Boston did even better, with rates of annual average growth of 8.9 percent and 9 percent, respectively, (for the 1982-96 period, based on the latest available information). The superior performance reflects the upgrade quality of the hi-tech driven economies of the metro region and the state, and the upscale characteristics of Boston's producer services economy. These job quality features account for annual average wage levels, in Boston, in 1986, which were higher than those in the metro region, which, in turn were higher than those in the State, and which were higher than those in the Nation.

The future of Boston's economy looks to be as strong as it has been in recent years. A diversified economic base that includes financial services, medical research, high technology and light manufacturing will provide sound footing for weathering inevitable recessionary cycles in the national economy. Evidence of continued growth in Boston's downtown office construction is found in the list of private megaprojects. Presented in Table 1, information on 12 of Boston's megaprojects shows 12,034 construction jobs (FTE/yr) and 5,149 permanent jobs created through nearly 8.5 million square feet of new development. The cumulative cost of these new developments is in excess of $2.1 billion, and along with this investment will come additional personal and corporate income taxes, sales tax and other revenues from which the entire Commonwealth will benefit.

TABLE 1

BOSTON'S PRIVATE MEGAPROJECTS: SCHEDULE OF PLANNED CONSTRUCTION - MAY 1, 1989 - APRIL 30, 1990

Project	Gross Floor Area	Development Cost	Total Construction Job Worker Years	Estimated Construction Period (Years)	Average Jobs During Construction	Equivalent Estimated BRA Board Date
Boston Science Center	758,715	$ 150,000,000	900	2.0	450	May #1
45 Province Street	164,143	33,000,000	186	2.0	93	May #2
Parcel 18, Phase I	239,350	51,000,000	288	2.0	144	June #1
Kingston-Bedford	995,000	300,000,000	1,693	2.5	677	June #1
Commonwealth Center Phase I	1,254,010	335,000,000	1,891	2.5	756	June #2
Boston Crossing* Phase I	2,188,000	450,000,000	2,540	3.0	847	June #2
Prudential Phase I	750,000	186,000,000	1,050	2.0	525	August #1
40 Franklin Street**	500,000	170,000,000	959	2.5	384	August #2
International Place Phase II	600,000	183,000,000	1,033	2.0	516	Approved
222 Berkeley Street	505,000	134,700,000	760	2.0	380	Approved
125 High Street Phase II	448,268	120,000,000	677	2.0	339	Approved
80 Bedford Street	42,859	10,000,000	56	1.5	38	Approved
TOTAL	8,445,345	$2,122,700,000	12,034		5,149	

* *GSF Net Of Lafayette Hotel Floor Area*

** *GSF Net Of Above Grade Parking And Woolworth's Floor Area*

The enormous public projects now underway to strengthen this infrastructure are crucial to the future of the Boston economy and, therefore, the Massachusetts economy. The health of both economies is dependent, however, not only on provision for the physical needs, which the state projects are addressing, but also upon resolving the problems of poverty, housing, and underemployment. Left unresolved, these problems will threaten the continued growth of the economies of the city and the state.

Just as Boston contributes disproportionately to the state's well-being, it also suffers disproportionately from problems related to poverty and underemployment. While home to only 10 percent of the Commonwealth's population, Boston has 20 percent of the Commonwealth's impoverished population. Further, while only 20 percent of the metropolitan region's population, Boston has 42 percent of the metropolitan region's impoverished population. The result is that the problems associated with poverty are borne disproportionately by the City.

The magnitude of the megaprojects suggests a potential which could extend well beyond the physical size and cost of the projects themselves. The shared purpose of the City and State is to achieve this full potential by using the employment opportunities these projects present to break through the problems of concentrated poverty, and unemployment. This breakthrough can only be achieved by concentrating and targeting opportunities. If, on the other hand, the employment benefits are diluted through lack of targeting, there will be only a minimal impact on the problems.

LINKAGE: A Bridge Of Opportunity Between Downtown And The Neighborhoods

The Linkage Concept

The Flynn adminstration is committed to ensuring that every neighborhood in the City benefits from the economic growth that the city is experiencing. To achieve this vision, the city has implemented linkage policies to direct the benefits of downtown growth to Boston's neighborhoods. Linkage works by taking a portion of the value created by investment in private development and directing that portion to making improvements in Boston's neighborhoods. The City views its linkage policy as a new form of "social contract" through which lasting bridges of opportunity are built between areas of the city experiencing rapid growth and the people in Boston's neighborhoods who, historically, have not shared in the benefits of that growth. Boston's linkage policies are based on the premise that there is not a division between the needs of the community and the growth of the city's economy. Rather, economic expansion is a perquisite enabling the community to live up to values that are commonly shared by its members.

The housing linkage policy requires developers for large commercial projects either to build affordable housing or to contribute money to build such housing. The amount of the housing linkage obligation is calculated at $5 for every square foot over 100,000 square feet, which for a typical 20-story office building, is worth roughly $2,000,000. For a project built downtown, ten percent of the linkage obligation is targeted to the area adjacent to the project. For a project built outside of downtown, twenty percent of the linkage obligation is so targeted.

In December 1983, the city's affordable housing linkage policy was first implemented, Since that time, the city's linkage policies have been expanded. In February 1986, Boston's linkage policy was revised. The linkage fee was increased from $5.00/square foot to $6.00/square foot in order to include funds for job training. Five dollars is now targeted for housing and $1.00 for job training. The payment period for housing linkage has been reduced from twelve years to seven years and job training linkage is due over a period of two years. The first linkage payment is due upon issuance of a building permit.

Jobs linkage requires a developer to contribute $1 for every square foot of floor space built over 100,000 square feet. For a typical 20-story office building this contribution is worth roughly $300,000 of which twenty percent is reserved for residents of the neighborhoods adjacent to the development. Instead of a cash contribution, the developer may choose to use its jobs linkage commitment to create and operate its own job training program for Boston residents who would become permanently employed at the project.

When linkage was first proposed, many developers, and some city officials, were skeptical. Segments of the development community, in particular, predicted that linkage would create a "disincentive" for the development of office and other commercial buildings and would lead developers to invest elsewhere.

A typical 20-story office building in Boston will generate approximately $2,000,000 in housing linkage contributions, and approximately $300,000 in job training contributions.

Despite the initial skepticism, Boston continues to be an extremely attractive city for office and commercial development. The current office vacancy rate for class A office space is 11.1%. Class A office space in the downtown area rents for approximately $35.00 per square foot. The waiting list to invest in Boston continues to grow. Investors from New York, Chicago, Canada, Europe, Japan, and elsewhere are all looking for opportunities to participate in Boston's economic growth.

Boston's linkage program has already shown results. As of May 1989, 32 major development projects have committed to pay over $47 million in housing linkage. As of April, 1989, a total of $47 million in developer contributions has been committed to affordable housing construction and rehabilitation alone under Linkage I. Of this amount, $28 million has thus far been targeted to affordable housing developments through Housing Creation and Neighborhood Housing Trust cash grants. In the 31 housing developments assisted with Linkage I funds thus far, nearly 2,500 new units of housing have been created, of which 83 percent (2,049 units) are affordable to low- and moderate-income households. Another $1,362,395 in linkage funds for training is anticipated during 1989 alone and, as much as $3,132,500 in additional job training funds may be generated through 1990. Thus, between 1986 and 1990, more than $6,000,000 in job training linkage funds may be generated in the City of Boston.

Examples of linkage in Boston can also be seen in numerous public-private partnerships. The Boston Resident Jobs Policy requires developers of major projects to ensure that 50 percent of all construction workers be Boston residents; that 25 percent be minorities, and that 10 percent be women. The Boston Housing Partnership, a consortium of private lenders and developers, city and state government officials, and neighborhood based non-profit Community Development Corporations, was formed to build and rehabilitate affordable housing. The Boston Compact is a partnership between the City's major employers and the public schools to provide jobs and job training for Boston high school graduates, as an incentive for improving the performance of the public schools. These and other innovative programs are part of the Flynn Administration's effort to serve the needs of Boston's low- and moderate-income population.

Linkage II: Parcel-to-Parcel Linkage

Boston's second type of linkage policy, known as Parcel-to-Parcel Linkage, is a first-in-the-nation approach to directly linking downtown development projects to tandem development projects in Boston's residential neighborhoods. Under this approach, disposition of publicly owned downtown parcels of land is literally linked to development of other publicly owned parcels in the neighborhoods. In addition to linking development of the two parcels, the policy requires the

economic co-participation of local community development organizations, minority businesses and developers, and neighborhood residents themselves.

The first two of Boston's Parcel-to-Parcel Linkage projects are already underway. Parcel-to-Parcel I links a downtown development site — currently a city-owned parking garage adjacent to the Chinatown neighborhood — with another publicly owned site in Roxbury. The combined projects represent a total $500,000,000 in development investment, with $7,000,000 million in housing linkage funds and $1,500,000 in job training linkage funds earmarked for the two neighborhoods. The Parcel-to-Parcel II project, though smaller in scale than Parcel-to-Parcel I, will generate $23,000,000 in development investment and produce 250 units of affordable housing in the City's South End neighborhood, as well as job training funds for residents of that neighborhood.

The Future of Linkage

As Boston's diversified economy continues to grow and be among the leaders in the nation in fields such as financial services, medical research and high technology, the promise remains for continued growth and improvements in Boston's downtown as well as in its neighborhoods. The bridge that will continue to link these distinct yet interdependent parts of Boston will be City's linkage policies. As it does so, linkage will also be the bridge to opportunity for all of Boston's residents and, ultimately, the bridge to an even brighter and more prosperous future for Boston itself.

DIP PROJECTS: HOUSING LINKAGE SUMMARY

Completed Projects	Total Housing Payment
75 State Street	$3,075,000
Rowes Wharf	$2,121,745
International Place-I	$5,066,515
150-160 Federal Street	$3,469,510
75-101 Federal Street	$2,325,000
99 Summer Street	$800,000
Heritage on the Garden	$445,000
500 Boylston Street-1	$3,100,000
20 Custom House Street	$220,055
745 Atlantic Avenue	$328,700
101 Merrimac Street	$329,175
101 Arch Street	$1,500,000
Ingalls Building	$275,530
360 Newbury Street	$73,860
125 Summer Street	$1,742,225
733-751 Boylston	$60,000
73 Tremont Street	$980,000
125 High Street	$6,376,925
Children's Hospital	$930,000
Brigham and Women's	$22,255
Boston College	$322,270
Harvard Med School	$72,500
Boston University	$152,460
CNY #33, 34, 38, 39	$658,120
Schrafft's	$2,442,440
280 Summer Street	$138,250
CNY #149	$2,711,805
Mass. General Hospital	$3,674,140
15 New Chardon Street	$206,020
Deaconess Hospital	$768,500
Portland Place	$663,420
116 Huntington Avenue	$763,465
GRAND TOTAL	$45,814,885

The following projects have submitted Project Notification Forms (PNFs) but have not executed DIP Agreements. Linkage payment estimates are preliminary estimates based on the square footages proposed in the PNFs.

Potential Contributors	Estimated Total Housing Payment
Boston Science Center	$2,550,000
Kingston Bedford	$4,250,000
Don Bosco	$852,400
45 Province Street	$300,000
Commonwealth Center	$8,500,000
Boston Crossing	$15,000,000
40 Franklin Street	$2,225,000
Boston Garden	$14,732,500
Prudential Center	$5,000,000
TOTAL (NOMINAL) HOUSING LINKAGE	$51,909,900

Housing Creation Through Linkage: Investing in the Future of Boston's Neighborhoods

The Brooks School

Location	Roxbury
Developer	Minority Development and Education Association
Architect	Quincy-Geneva CDC
Program	57 Units/77% affordable

Fountain Hill Square

Location	Roxbury
Development	Taylor Properties, Inc.
Architect	Chisolm Washington, Inc.
Program	124 Units in 62 buildings/50% affordable

Dawson-Langley Apartments (TCD III) and East Berkeley Street Condominiums (TCD IV)

Location	South End
Developer	Tenant's Development Corporation
Architect	Stull and Lee
Program	59 Units/65%affordable, 35 units/66% affordable

Monsignor Joseph W. Lyons Housing Development

Location	South Boston
Developer	South Boston Community Housing, Inc.
Architect	Office of the Archdiocese of Boston
Program	10 units/100% affordable

Harborpoint

Location	Dorchester
Developer	Columbia Point Task Force and Peninsula Partners
Architect	Goody, Clancy with Mintz Associates
Program	1,283 units/400 affordable for low-income families

Leighton Park (Tent City)

Location	South End
Developer	Leighton Park Limited Partnership
Architect	Good, Clancy and Associates
Program	271 rental units/75% affordable

Habitat Houseraising Project

Location	Dorchester
Developer	Boston Affiliate of Habitat for Humanity
Architect	Acorn Structures
Program	11 units/100% affordable

Navy Yard Row Houses

Location	Charlestown Navy Yard
Developer	The Bricklayers and Laborers Non-Profit Housing, Co., Inc.
Architect	William Rawn Associates
Program	50 units/32% affordable

Infill

Location	Scattered vacant sites
Developer	Infill Collaborative of Four Community Development Corporations
Architect	CPF/Domenech & Hicks
Program	84 condominium units in 17 buildings/89% affordable

Granite Properties - BHP II

Location	Dorchester and Roxbury
Developer	Community Development Corporations
Architect	Migliassi-Jackson, Hezekiah & Pratt Associates, City Design, R.D. Fanning & Associates Tenant Gadd Associations
Program	937 units in 51 buildings/100% affordable

Langham Court

Location	South End
Developer	Four Corners Development Corporation
Architect	Goody, Clancy and Associates
Program	84 units/67% affordable

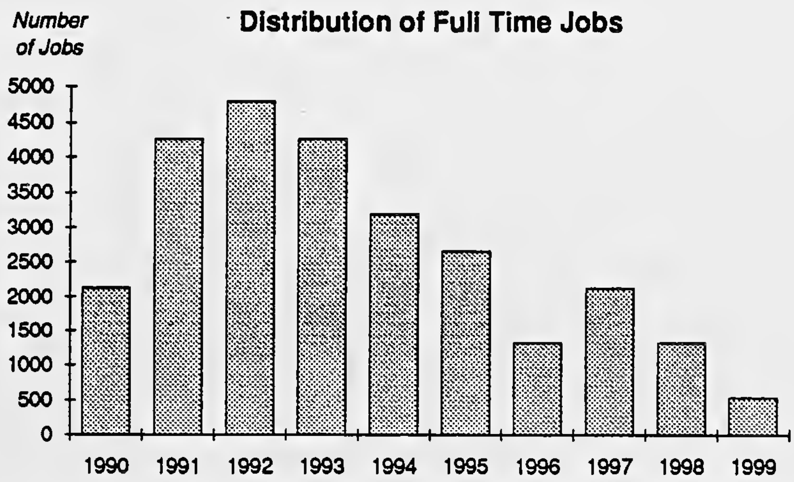
The Job Opportunity Potential Of The Central Artery/Third Harbor Tunnel Project

Overall Employment Opportunities

At first glance, the depression of the Central Artery and construction of the Third Harbor Tunnel appear to offer a level of opportunity for job creation unmatched in the history of Boston or the Commonwealth of Massachusetts. Indeed, projections of employment over the period 1990 to 1999 suggest that the project will require *a total of 26,605 full-time equivalent man-years of employment* (FTE/yr). This measure reflects the fact that construction jobs are not permanent for any one project. The projected distribution, by year, of these jobs is presented in Graph 1 and Table 2 on the following page.

Projections of employment over the period 1990 to 1999 suggest that the project will require a total of 26,605 full-time equivalent man-years of employment (FTE/y).

Graph 1



As the yearly job projections indicate, the level of demand for labor is not constant throughout the life of the Central Artery/Third Harbor Tunnel Project. From 1990 through 1992, the project will experience a rapid increase in labor demand from 2,100 to 4,800 jobs. Beginning in 1991 and continuing through 1993, the project will experience its peak labor demand, requiring, on average, 4,435 jobs per year during this period. At its apex in 1992, the project will require 4,790 full-time workers. After the 1992 peak, labor demand will decline through scheduled completion in 1999.

In addition to the variable patterns of job opportunities presented by the Central Artery/Third Harbor Tunnel Project, a key factor that serves to place the opportunity of the project in perspective is the distinction between *full-time equivalent man-years* of employment and the varying actual number of jobs over the life of the project. Whereas projections call for 26,605 person-years

TABLE 2

CENTRAL ARTERY ANNUAL EMPLOYMENT BY OCCUPATION

	Number of Jobs						Number Hired		
Year	Total (100%)	White Collar (19.2%)	Total On-Site (80.8%)	Labor (25.6%)	Crafts, etc., Total (54.7%)	Crafts, etc. Apprentices 16.7% of Crafts	Total On-Site	Crafts Apprentices	White Collar
1990	2,128	408	1,720	544	1,164	194	1,720	194	408
1991	4,257	817	3,440	1,088	2,329	388	1,978	223	470
1992	4,790	919	3,871	1,224	2,621	437	947	107	225
1993	4,257	817	3,440	1,088	2,329	388	150	17	36
1994	3,193	613	2,580	816	1,747	291	(344)	63	(82)
1995	2,660	510	2,150	680	1,456	243	(44)	112	(10)
1996	1,330	255	1,075	304	728	121	(752)	(29)	(179)
1997	2,128	408	1,720	544	1,164	194	806	100	191
1998	1,330	255	1,075	340	728	121	(387)	(11)	(92)
1999	532	102	430	136	291	49	(484)	4	(115)
TOTAL	26,605	5,105	21,500	6,798	14,558	2,427	5,601	839	1,330

Sources: *The number and timing of "Total On-Site" jobs was developed by Bechtel/Parsons Brinkerhoff, management consultants to the Central Artery Project. Occupational distribution and the number of off-site white collar jobs is derived from the U.S. Dept. of Labor, Bureau of Labor Statistics occupation matrix for the Highway and Street Construction industry. The TOTAL row for these Number of Jobs columns are total job years (one job over one year).*

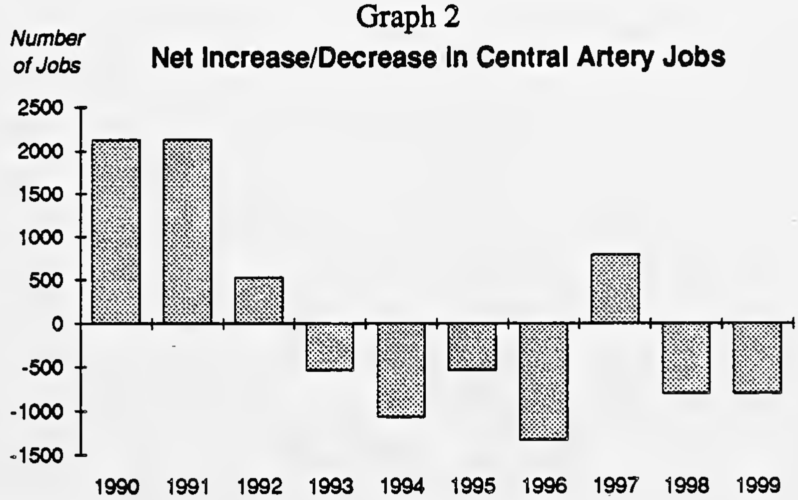
Note: *Number hired are estimated as the full "number of jobs" for the first year. For subsequent years, we hire (or lay-off) to meet the increase (or decrease) over the previous year's "number of jobs". We also hire to replace 15 percent of the previous years workers, assumed lost though attrition. Starting in the fifth year (1994) we also hire new crafts opprentices to reploce those who have completed their four year apprenticeships. Since we are assuming 15% annual attrition, only 52 percent of apprentices are expected to compete the four year program. The TOTAL row for Number Hired is a gross figure representing all hires, including those who may stay on the job only one year.*

of work jobs, the actual jobs created between 1990 and the peak year of 1992 total only 4,790 positions. Beginning in 1993, the number of actual jobs involved in the project gradually decreases, reaching a low point of 532 jobs in 1999, the final year of the project. The net increases/ decreases in jobs over the life of the project are demonstrated in Graph 2.

A key factor that serves to place the the total job opportunity potential of the projects in perspective is the distinction between full-time equivalent man-years of employment and net new jobs created over the life of the project.

Graph 2

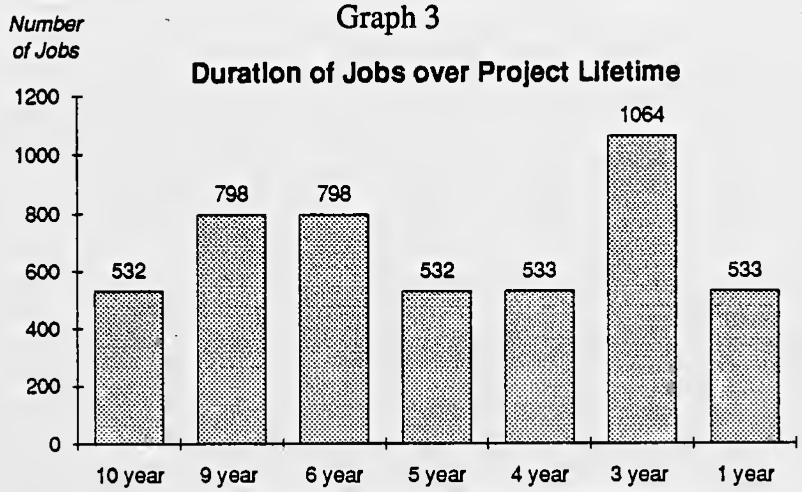
Net Increase/Decrease in Central Artery Jobs



The job opportunity impact potential of the Central Artery/Third Harbor Tunnel Project is further limited by the variable *durations* of jobs over the life of the project. Only 532 total jobs are projected to exist for the entire ten-year period, and even these are not steady jobs for individual workers, since skill and occupational requirements change over the course of the project. One hundred jobs are projected to last for nine years, and another 798 jobs will be available for a period of six years. A total of 4,257 jobs will have a three-year existence, those being the peak years of 1991-1993. This data is presented in Graph 3.

Graph 3

Duration of Jobs over Project Lifetime

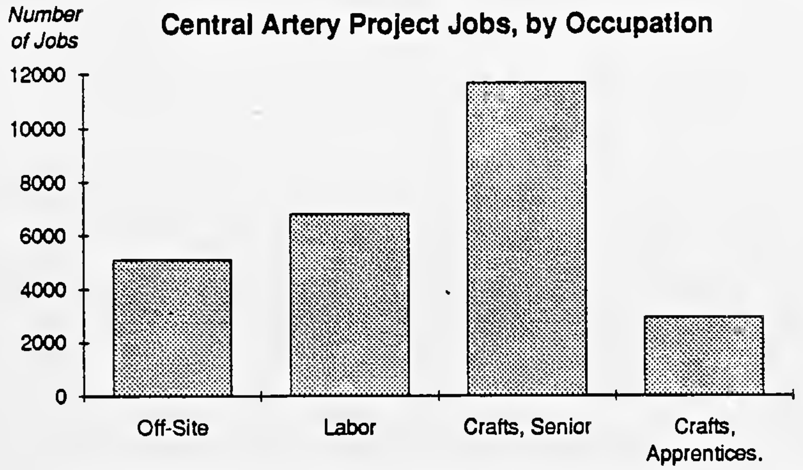


The implications of the above-described disparities in the lifespans of Central Artery/Third Harbor Tunnel jobs are that not all workers on the project can expect steady, long-term employment despite the length or scale of the project.

The significance of jobs projections the crafts fields is that those positions have a direct correlational impact on the number of union apprenticeship positions to be created by the project.

Graph 4 presents information on the general occupational categories of jobs created by the Central Artery/Third Harbor Tunnel Project. The graph reflects the significant role that jobs in the "crafts" fields play in the overall distribution of labor involved in the project. As will be discussed below, the number of jobs in the crafts category will be the basis for determining the number of apprenticeship positions created over the life of the project.

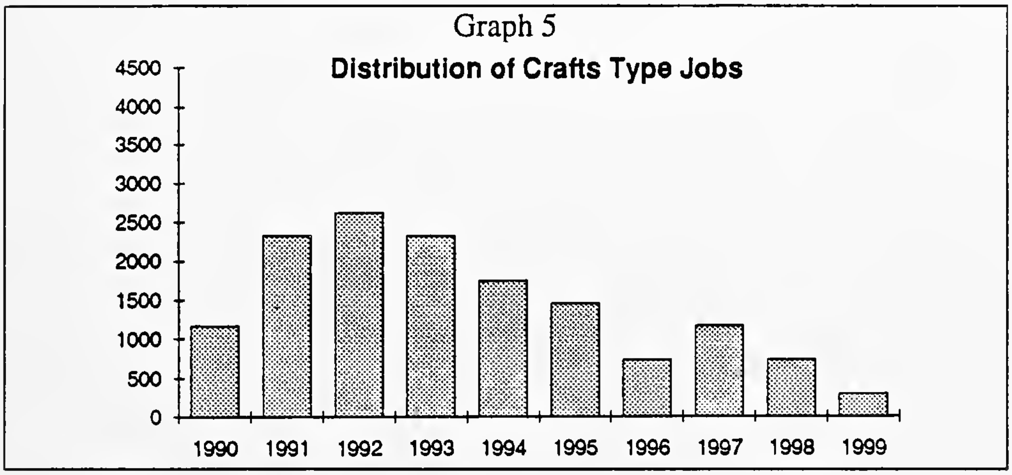
Graph 4



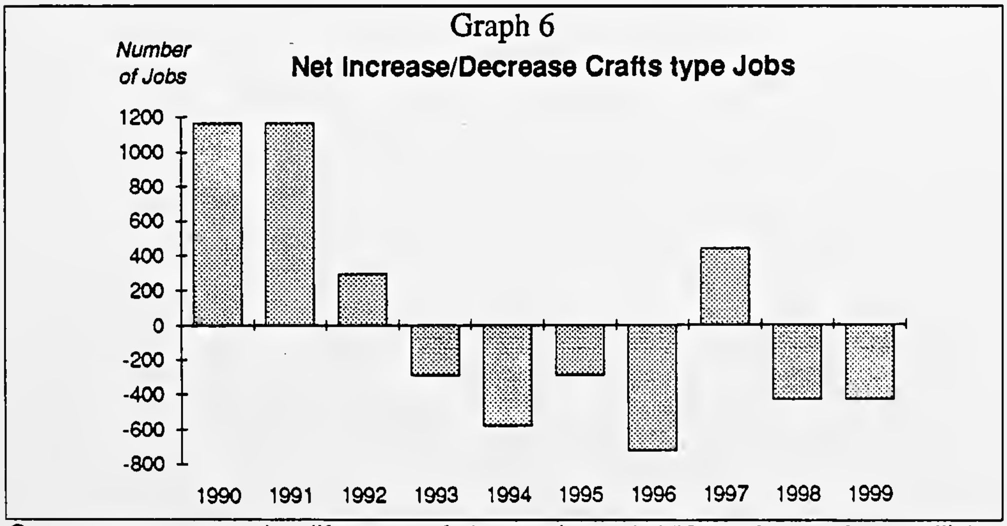
Job Opportunities in Crafts Fields

Job opportunities created by the Central Artery/Third Harbor Tunnel Project in "crafts" fields, i.e., those requiring specialized training and skills, follow patterns similar to the overall employment projections for the lifespan of the project. A total of 14,558 FTE/yr. jobs are projected for the crafts fields, with annual increases in labor demand occurring between 1990 and the peak year, 1992; decreasing demand for crafts positions begins in 1993,

and continues through the end of the project in 1999. This pattern is reflected in Graph 5.



Also consistent with overall employment patterns is the distinction between the full-time equivalent man-year requirements for crafts positions and the net new crafts positions created over the lifespan of the project. Between 1990 and the peak year of 1992, a total of 2,462 crafts positions will be required. The demand for crafts workers begins to decline in 1993, and continues declining until 1999, when the project nears completion. This pattern is reflected in Graph 6.



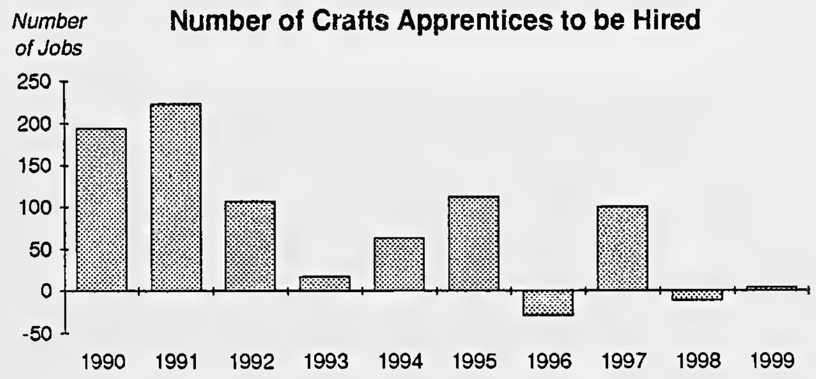
On average, over the lifespan of the project, 1,456 crafts workers will be employed per year.

Apprenticeship Opportunities in Crafts Fields

The significance of jobs projections for Central Artery/Third Harbor Tunnel positions in the crafts fields is that those positions have a direct correlational impact on the number of union apprenticeship positions to be created by the project. The Commonwealth's Building Opportunities Project calls for one apprentice for every five journeymen positions working on the project, a 16.7 percent factor for determining the number of apprenticeship positions.

Measuring by the full-time equivalent man-year projections for crafts fields positions, the project will yield a 2,427 (16.7% x 14,558) full-time equivalent years of apprenticeship. The actual number of apprenticeship opportunities created by the project, however, is the net number resulting from (a) the total number of apprenticeships created minus (b) a minimum 15% annual attrition rate plus (c) a replacement number for program graduates. The resulting projection of apprenticeship positions over the lifespan of the Central Artery Project is for 839 positions. The actual number of apprenticeship hires by year, over the lifespan of the project, is presented in Graph 7.

Graph 7



Summary

Measured in full-time equivalent man-year positions, the Central Artery/Third Harbor Tunnel Project will create an unprecedented level of employment for Boston and the Commonwealth over the next decade. However, the number of net new jobs, assuming the majority of workers will remain on the job for more than one year, is considerably smaller. The fact the crafts fields, as a subset of total jobs, will be the only category in which apprentices are hired serves to further limit the project's potential for creating new apprenticeship opportunities. In view of the bottom-line limitations on the number of new apprenticeship positions, effective targeting strategies will be critical to matching training opportunities to those segments of the population most in need.

The Demographics Of Need For Central Artery Job Opportunities

The Central Artery/Third Harbor Tunnel Project is a significant undertaking for the City of Boston in numerous respects. One of the most important aspects of the project is its potential for ameliorating social and economic problems in Boston neighborhoods by providing opportunities for economic self-sufficiency to residents in need. The skills and credentials imparted through union apprenticeship training programs offer the hope, as well as the opportunity, for a future in which personal growth and economic stability replace the problems and despair of poverty.

One of the most important aspects of the project is its potential for ameliorating social and economic problems in Boston neighborhoods by providing opportunities for economic self-sufficiency to residents in need.

Given the rarity of a project the scale and magnitude of the Central Artery/Third Harbor Tunnel Project, and considering the ever-increasing severity of the poverty related problems in Boston's neighborhoods, the jobs generated by the project offer literally a once-in-a-lifetime window of opportunity through which poverty can be meaningfully addressed. As detailed in Section 4 of this report, the fact that apprenticeship opportunities are limited over the lifespan of the project weighs strongly for a targeting strategy that seeks to match available opportunities with those individuals in greatest need.

The City of Boston maintains the position that significant costs associated with poverty related problems — among them drug abuse, crime, infant mortality and welfare dependency — are borne by the City, the Commonwealth and society as a whole. The fact that Boston is home to 42% of the metro area's poverty population — while comprising only 20% of the metro area's total population — is evidence of the fact that the City bears a disproportionate share of poverty costs, in human and social respects as well as in economic respects. It is also evidence of where the concentrations of poverty and, hence, its compounded effects, are to be found within the Commonwealth.

The Poverty Problem in Boston Neighborhoods

In the neighborhoods of Boston directly impacted by the Central Artery/Third Harbor Tunnel Project — East Boston, South End, South Boston and Central (Downtown) — 23,464 household residents lived in poverty in 1985 (BRA Survey). In other neighborhoods in which substantial pockets of poverty exist — Roxbury, Jamaica Plain, North and South Dorchester, Mattapan/ Franklin Field, — another 65,172 household residents lived in poverty in 1985. Combined, these nearly 88,636 persons living in poverty represent more than one-in-every-four (27%) household residents of these areas of Boston. Table 3 details the numbers of residents in poverty by neighborhood.

Even more alarming than the average 27 percent level of poverty in these neighborhoods of Boston are the neighborhood-by-neighborhood poverty rates also detailed in the graph above. In North Dorchester, for example, the poverty rate in 1985 was 34 percent. In South Boston, Roxbury and Jamaica Plain, the

TABLE 3

COMPARISONS OF INCOME AND POVERTY INDICATORS, BOSTON NEIGHBORHOODS, 1985

Central Artery Project Impact Area Neighborhoods	Population In Households	Population Household Income ($)	Percent of all Persons In: Median Poverty	Percent of all Persons In: Single-Parent Household in Poverty
East Boston	32,344	13,600	27	15
South End	23,112	22,200	17	10
South Boston	29,081	11,000	31	19
Central	22,341	32,600	8	*
Impact Area SubTotal	106,878	NA	22%	14%
Other Neighborhoods				
Back Bay/Beacon Hill	24,811	32,500	7	2
Charlestown	13,199	22,700	17	7
Fenway/Kenmore	25,844	16,250	22	4
Allston/Brighton	61,334	22,400	17	*
Jamaica Plain	41,383	16,200	31	20
Roxbury	56,875	13,000	31	16
North Dorchester	25,433	11,300	34	20
South Dorchester	58,853	18,750	29	16
Mattapan/Franklin Field	39,118	22,500	23	17
Roslindale	31,800	22,450	6	1
West Roxbury	33,816	27;250	8	8
Hyde Park	32,118	27,500	8	2
City of Boston	551,500	19,250	21	10

* *Less than 0.5 percent.*

Note: Households include students living off campus. Excluding students would lower the poverty rate in some neighborhoods.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by the Center for Survey Research, 1985.

rate in 1985 was 34 percent. In South Boston, Roxbury and Jamaica Plain, the rate was 31 percent. In South Dorchester, East Boston and Mattapan/Franklin Field, the rates were 29 percent, 27 percent and 23 percent, respectively.

The low unemployment levels enjoyed by Boston and the Commonwealth during most of the 1980s has not proven to ameliorate poverty in areas where it is most concentrated.

These higher-than-average rates of poverty point to severe "pockets" of poverty which tend to remain intractable despite reductions in either the overall poverty rate or unemployment rates. Indeed, the low unemployment levels enjoyed by Boston and the Commonwealth during most of the 1980s has not proven to ameliorate poverty in areas where it is most concentrated. The primary explanation of this circumstance in which a rising tide does **not** lift all boats is that structural unemployment — characterized by a lack of skills through which opportunities may be obtained — is also highest in high-poverty neighborhoods.

Unemployment in Boston Neighborhoods

The overall unemployment rate in the City of Boston measured in March 1989, is approximately (3.6) percent. In numbers, this represents 11,170 workers. Boston's overall unemployment rate is roughly equivalent to that of its metro region. For both areas, the rate is approximately half of the 1985 level of 6.2 percent.

As in the case of Boston's poverty problem, however, unemployment rates in certain City neighborhoods exceed the overall rate. In Roxbury, for instance, the rate is currently 8 percent — double the city average rate. In Jamaica Plain and Mattapan/Franklin Field, the rate is double at 6 percent. The city average rate is exceeded by at least one percent in four other Boston neighborhoods. This neighborhood-by-neighborhood analysis is presented in Table 4.

Unemployment information on Boston's minority residents is presented in Table 5. Boston's overall minority unemployment rate is 7 percent — double the City's average. Again, in certain neighborhoods, the problem is significantly greater. The data shows minority unemployment rates of 18 percent in East Boston, 17 percent in Charlestown, 13 percent in Roslindale, and rates exceeding the overall minority rate in 7 other neighborhoods. Altogether, about 7,130 minority Boston residents are currently unemployed.

With respect to female unemployment in the City of Boston, the overall unemployment rate of 3 percent is slightly lower than the city's overall unemployment rate. In the same neighborhoods of Boston that also experience higher overall and minority unemployment, however, the female unemployment problem is correspondingly higher. In Roxbury, for instance, the female unemployment rate is double that of females citywide. In four other neighborhoods, the female is at least one percent above the citywide rate for females. In numbers, approximately 3,740 female Boston residents are currently unemployed. This information is presented in Table 6.

In terms of youth unemployment, there are more than 6,000 youths — ages 16 to 29 — currently unemployed in the City of Boston. Of this number, 4,035 - nearly two-thirds - reside in impacted or double-poverty neighborhoods. The

percent for 20 to 29 year olds. Youth unemployment rates in poorer and minority neighborhoods of Boston are significantly higher than the average citywide percentages, notably — Roxbury's 28 percent jobless rate for 16 to 19 year olds and 7 percent rate for 20 to 29 year olds are both more than twice the city average. The data on youth unemployment in Boston is presented in Table 7.

Summary

The potential for the Central Artery/Third Harbor Tunnel Project to ameliorate the problems of poverty and underemployment must be viewed as equal in importance to the infrastructural improvements which the project will yield. This view is underscored by evidence that the low unemployment rates enjoyed by Boston and the Commonwealth throughout much of the 1980s have not resulted in commensurate reductions in the levels of poverty and underemployment. The fact that Boston's poverty population is more than double the city's proportion of the metro region's total population suggests a level of need for job opportunities in Boston of equal proportions. The suggestion is reinforced by examination of the concentrations of extreme poverty which exist in several of Boston's inner-city neighborhoods.

TABLE 4

TOTAL UNEMPLOYMENT FOR BOSTON'S NEIGHBORHOODS, 1989

Neighborhoods	Total Persons	Household Population Age 16+	Labor Force Participation Rate	Adjusted Unemployment Rate (A)	Total Number of Unemployed Persons
East Boston	32,956	27,515	56%	5%	804
South End	25,372	20,107	65%	1%	76
South Boston and Harbor Islands	32,280	29,076	62%	2%	418
Central	24,924	19,660	71%	2%	243
Impact Area Sub-Total	115,532	96,359	63%	3%	1,541
Back Bay-Beacon Hill	31,552	23,322	71%	1%	96
Charlestown	13,441	10,427	75%	5%	363
Fenway-Kenmore	42,320	22,778	78%	5%	927
Allston-Brighton	68,413	57,041	69%	2%	685
Jamaica Plain	44,401	31,451	65%	6%	1,304
Roxbury	58,475	42,656	63%	8%	2,182
North Dorchester	26,005	19,075	55%	2%	183
South Dorchester	60,373	43,551	68%	5%	1,374
Mattapan	40,395	26,600	72%	6%	1,222
Roslindale	32,873	25,440	74%	4%	764
West Roxbury	34,703	28,067	67%	2%	436
Hyde Park	32,612	25,052	63%	1%	92
Boston	601,095	451,820	67%	4%	11,170

Notes: *Population counts refer to 1985.*
(A): 1985 neighborhood unemployment rates adjusted downward in proportion to the City of Boston decline from 6.2 percent (1985 Household Survey) to 3.6 percent, March 1989 (Massachusetts Division of Employment and Training).

Source: *Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.*

TABLE 5

MINORITY UNEMPLOYMENT FOR BOSTON'S NEIGHBORHOODS 1989

Neighborhoods	Minority Household Population Age 16+	Neighborhood Population Percent Minority	Minority Labor Force Participation Rate (A)	Minority Unemployment Rate (B)(C)	Total Number of Unemployed Minorities
East Boston	1,788	8%	53%	18%	168
South End	12,366	66%	62%	1%	64
South Boston and Harbor Islands	652	3%	59%	9%	34
Central	3,303	17%	68%	5%	105
Impact Area Sub-Total	18,109	28%	62%	3%	372
Back Bay-Beacon Hill	1,819	9%	68%	2%	23
Charlestown	302	3%	72%	17%	37
Fenway-Kenmore	9,658	48%	75%	9%	678
Allston-Brighton	10,039	19%	66%	5%	306
Jamaica Plain	13,776	49%	62%	11%	968
Roxbury	39,414	93%	60%	9%	2,112
North Dorchester	5,932	34%	53%	4%	115
South Dorchester	18,509	49%	65%	8%	1,006
Mattapan	23,754	92%	69%	7%	1,171
Roslindale	2,340	9%	71%	13%	213
West Roxbury	1,403	4%	64%	8%	73
Hyde Park	6,163	30%	60%	1%	50
Boston	151,220	38%	64%	7%	7,125

Notes: Population counts refer to 1985.

(A): Minority labor force participation rate is 95 percent of overall neighborhoods rates, as found in the 1985 Household Survey.

(B): Minority unemployment rates are calculated as four times the rate for whites, as found in the 1985 Household Survey.

(C): Overall unemployment rates are calibrated to March, 1989 Boston City average of 3.6 percent (Mass. Div. of Employment and Training).

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

TABLE 6

FEMALE UNEMPLOYMENT FOR BOSTON'S NEIGHBORHOODS, 1989

Neighborhoods	Household Population Age 16+	Female Household Population (52 percent)	Adjusted Female Labor Force Participation Rate (A)	Adjusted Female Unemployment Rate (B)	Unemployed Females
East Boston	27,515	14,308	50%	4%	302
South End	20,107	10,456	58%	0%	28
South Boston and Harbor Islands	29,076	15,120	56%	2%	157
Central	19,660	10,223	64%	1%	91
Impact Area Sub-Total	96,359	50,107	56%	3%	579
Back Bay-Beacon Hill	23,322	12,128	64%	0%	36
Charlestown	10,427	5,422	67%	4%	136
Fenway-Kenmore	22,778	11,845	70%	4%	348
Allston-Brighton	57,041	29,661	62%	1%	257
Jamaica Plain	31,451	16,355	58%	5%	490
Roxbury	42,656	22,181	56%	7%	820
North Dorchester	19,075	9,919	49%	1%	69
South Dorchester	43,551	22,647	61%	4%	516
Mattapan	26,600	13,832	64%	5%	459
Roslindale	25,440	13,229	66%	3%	287
West Roxbury	28,067	14,595	60%	2%	164
Hyde Park	25,052	13,027	56%	0%	34
Boston	451,820	234,947	60%	3%	4,197

Note: *(A): Labor force participation rate by neighborhood adjusted by City ratio of female to total participation rates (60% to 67%).*

(B): Unemployment rate by neighborhood (initially) adjusted by City ratio of female to total unemployment rate (5% / 6.2%) found in 1985. A final adjustment accounts for the overall decline of Boston unemployment rate from 6.2 percent to 3.6 percent in 1989 reported by Massachusetts Division of Employment & Training for March, 1989.

Population counts refer to 1985, State decinial census results.

Source: *Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.*

TABLE 7

YOUTH UNEMPLOYMENT FOR BOSTON'S NEIGHBORHOODS 1989

Neighborhoods	Population in Households	Persons as a Percent of Total (A) AGE 16-19	Persons as a Percent of Total (A) AGE 20-29	Labor Force Participation Rate (B) AGE 16-19	Labor Force Participation Rate (B) AGE 20-29	Adjusted Unemployment Rate (C) AGE 16-19	Adjusted Unemployment Rate (C) AGE 20-29	Total Number of Unemployed Youths AGE 16-19	Total Number of Unemployed Youths AGE 20-29	Total Number of Unemployed Youths AGE 16-29
East Boston	32,344	8%	18%	37%	65%	18%	5%	174	174	348
South End	23,112	4%	30%	43%	76%	2%	1%	8	27	35
South Boston and Harbor Islands	29,081	6%	22%	41%	72%	8%	2%	54	94	148
Central	22,341	3%	18%	47%	83%	6%	2%	20	51	71
Impact Area Sub-Total	106,878	5%	22%	42%	73%	9%	2%	256	346	601
Back Bay-Beacon Hill	24,811	2%	50%	47%	83%	2%	1%	4	52	56
Charlestown	13,199	5%	22%	50%	87%	16%	4%	51	103	154
Fenway-Kenmore	25,884	6%	56%	52%	91%	18%	5%	135	604	739
Allston-Brighton	61,334	4%	55%	46%	80%	6%	2%	68	414	482
Jamaica Plain	41,383	8%	23%	43%	76%	22%	6%	315	404	719
Roxbury	56,875	8%	20%	42%	73%	28%	7%	534	595	1,129
North Dorchester	25,433	6%	23%	37%	64%	6%	2%	36	57	93
South Dorchester	58,853	9%	21%	45%	79%	16%	4%	375	399	774
Mattapan	39,118	10%	16%	48%	84%	22%	6%	429	294	723
Roslindale	31,800	4%	26%	49%	86%	14%	4%	88	254	342
West Roxbury	33,816	6%	18%	45%	78%	8%	2%	77	97	174
Hyde Park	32,118	6%	16%	42%	73%	2%	1%	17	19	36
Boston	551,500	6%	28%	44%	77%	12%	3%	2,383	3,639	6,022

Notes: *Population counts refer to 1985, as determined by the State Decenial Census Commission.*
(A): "Persons Age 16-29" in 1985 approximates the number of 16-29 year olds in 1989, from 1985 Household Survey, Vol. I, Table 4, and unpublished Survey results.
(B): "16-19 Year Olds" adjusted by 44/66 from HHS, V3, Table 5B. "20-29 Year Olds" adjusted by 77/66 from HHS, V3, Table 5B, reflecting the relative participation rates of these age groups.
(C): "16-19 Year Olds" adjusted by 11.7/3.4 from BLS, 1st QTR, 1989 unemployment rate for 16-19 year olds (11.7) & Mass. Total (3.4). "20-29 Year Olds" adjusted by 5.4/6.2 from HHS, V3, Table 5B.

Source: *Boston Redevelopment Authority and Neighborhood Development & Employment Agency Household Survey, conducted by Center for Survey Research, 1985.*

Glossary

Building Opportunities Projects: The Commonwealth of Massachusetts system for determining who gains access to the apprenticeship positions created by the CA/THT megaproject.

CA/THT: Central Artery/Third Harbor Tunnel.

Crafts Type Jobs: Jobs requiring specialized training and skills.

DIP: Development Impact Projects

Double-Poverty Neighborhoods: Population with incomes less than twice the poverty level as determined by the U.S. Bureau of the Census.

FTE/YR: Full-time equivalent man year.

Linkage: City of Boston policy implemented in December of 1983 which requires for every square foot of development over 100,000 square feet, a contribution by the developer of $5.00 per square foot for affordable housing creation and $1.00 per square foot for job training.

Parcel-to-Parcel Linkage: A first-in-the-nation approach to directly linking downtown development projects to development projects in Boston's residential neighborhoods. Under this approach, disposition of publicly-owned downtown parcels is literally linked to development of other publicly-owned parcels in the city's neighborhood.

APPENDICES

APPENDIX A:Employment

APPENDIX B:Relative Wages

APPENDIX C:Unemployment Rate

APPENDIX D:Tax Yield of Fort Point Channel Development

APPENDIX E:Housing

APPENDIX A: Employment

Boston's Key Role in the Surrounding Economies

The City of Boston's specialization in Finance and Services plays a significant role in the various regional economies of which it is part. These two industry categories account for over half (54 percent in 1986) of Boston employment. Nationally, only 34 percent of employment was in the Finance and Service industries in 1986. The industries' annualized rates of growth in Boston since 1976 (3.1 percent in Finance and 3.7 percent in Services), are faster than those of Boston's other major industries, indicating that Finance and Services are increasingly important to the City's economy.

This concentration of employment defines Boston's function in the Metropolitan Area. While Boston had a 28 percent share of Metropolitan employment, it provided 56 percent of the jobs in the Financial industry (including 95 percent of its securities employment and 60 percent of insurance employment) and 37 percent of the Service industry employment (58 percent of professional services and 41 percent of health employment). These industries are integral components to Metropolitan Boston's growing high tech economy. Between 1976 and 1986, Metropolitan Boston <u>increased</u> its share of Massachusetts manufacturing employment, from 58 to 63 percent.

Metropolitan Boston had 61 percent of Massachusetts' total employment, with an even greater share of banking (76 percent of state employment) and education (also 76 percent of state employment). The relationships between these industries are close: venture capital, research universities, and computer companies all depend on each other for high value added inputs such as investment, an educated workforce, and a knowledge base.

Many of Boston's strengths are seen on the national level by examining the relative specialization of Massachusetts employment: With 2.9 percent of total

national employment, Massachusetts has 3.3 percent of national manufacturing employment, 3.0 percent of banking employment, 3.5 percent of securities employment, 8.5 percent of insurance employment. In addition, Massachusetts has 3.7 percent of the nation's health employment, 7.6 percent of educational employment, 3.6 percent of business services employment, and 3.4 percent of professional service employment. Boston has the central role in this dynamic, interrelated group of Massachusetts industries.

Role of Services: Employment Structure & Growth

I. United States

Industry	Employment 1986 No.	Employment 1986 Percent Composition	Change 1976-1986 No.	Change 1976-1986 Annual Growth Rate
Agri./Mining	2,200,900	1.8%	627,800	3.4%
Construction	6,697,500	5.5%	1,923,500	3.4%
Manufacturing	19,477,300	15.9%	102,300	0.1%
Trans/Comm./Pub. Util.	5,947,500	4.9%	960,800	1.8%
Wholesale Trade	6,158,600	5.0%	1,155,100	2.1%
Retail Trade	20,661,200	16.9%	4,911,500	2.8%
Finance/Ins./R. E.	9,716,800	7.9%	3,623,500	4.8%
Banking (SIC: 60,61)	2,587,400	2.1%	814,800	3.9%
Securities (62)	467,100	0.4%	260,400	8.5%
Insurance (63,64)	2,290,400	1.9%	577,200	2.9%
R. E./Other(65,66,67)	4,371,900	3.6%	1,971,100	6.2%
Services	31,964,900	26.1%	11,446,600	4.5%
Hotel (70)	1,546,300	1.3%	465,500	3.6%
Health (80)	7,368,300	6.0%	2,527,100	4.3%
Educational (82)	1,789,900	1.5%	458,200	3.0%
Cultural (78,79,84)	1,658,300	1.4%	480,000	3.5%
Soc./Non-prof. (83,86)	2,969,000	2.4%	574,000	2.2%
Business (73)	6,911,300	5.6%	4,000,500	9.0%
Professional (81,89)	3,625,400	3.0%	1,589,400	5.9%
Personal(72,75,76,88)	6,096,400	5.0%	1,351,900	2.5%
Government	19,665,000	16.1%	1,852,000	1.0%
Total	122,489,700	100.0%	26,603,100	2.5%

Role of Services: Employment Structure & Growth
II. New England

Industry	Employment			
	1986		Change 1976-1986	
	No.	Percent Composition	No.	Annual Growth Rate
Agri./Mining	76,970	1.0%	30,657	5.2%
Construction	414,429	5.5%	178,272	5.8%
Manufacturing	1,448,884	19.2%	67,961	0.5%
Trans/Comm./Pub. Util.	289,885	3.8%	52,384	2.0%
Wholesale Trade	360,762	4.8%	89,743	2.9%
Retail Trade	1,273,040	16.9%	351,201	3.3%
Finance/Ins./R. E.	601,937	8.0%	240,339	5.2%
Banking (SIC: 60,61)	155,261	2.1%	56,028	4.6%
Securities (62)	26,165	0.3%	14,547	8.5%
Insurance (63,64)	198,560	2.6%	54,601	3.3%
R. E./Other(65,66,67)	221,951	2.9%	115,163	7.6%
Services	2,134,957	28.3%	804,730	4.8%
Hotel (70)	81,633	1.1%	27,082	4.1%
Health (80)	536,787	7.1%	157,371	3.5%
Educational (82)	221,232	2.9%	59,433	3.2%
Cultural (78,79,84)	93,993	1.2%	28,143	3.6%
Soc./Non-prof. (83,86)	200,643	2.7%	54,673	3.2%
Business (73)	454,711	6.0%	282,147	10.2%
Professional (81,89)	229,837	3.0%	107,742	6.5%
Personal(72,75,76,88)	316,121	4.2%	88,139	3.3%
Government	943,383	12.5%	54,319	0.6%
Total	7,544,247	100.0%	1,869,606	2.9%

Role of Services: Employment Structure & Growth
III. Massachusetts

Industry	Employment			
	1986		Change 1976-1986	
	No.	Percent Composition	No.	Annual Growth Rate
Agri./Mining	31,503	0.9%	14,310	6.2%
Construction	174,347	4.9%	74,236	5.7%
Manufacturing	633,332	17.7%	27,682	0.4%
Trans/Comm./Pub. Util.	140,415	3.9%	19,597	1.5%
Wholesale Trade	178,526	5.0%	40,718	2.6%
Retail Trade	600,281	16.8%	150,193	2.9%
Finance/Ins./R. E.	278,271	7.8%	107,093	5.0%
Banking (SIC: 60,61)	76,489	2.1%	26,714	4.4%
Securities (62)	16,466	0.5%	8,646	7.7%
Insurance (63,64)	80,636	2.3%	16,617	2.3%
R. E./Other(65,66,67)	104,680	2.9%	55,116	7.8%
Services	1,099,929	30.8%	415,649	4.9%
Hotel (70)	34,772	1.0%	12,605	4.6%
Health (80)	269,429	7.5%	72,657	3.2%
Educational (82)	135,652	3.8%	35,539	3.1%
Cultural (78,79,84)	44,717	1.3%	12,967	3.5%
Soc./Non-prof. (83,86)	100,972	2.8%	34,739	4.3%
Business (73)	245,404	6.9%	151,392	10.1%
Professional (81,89)	124,547	3.5%	54,841	6.0%
Personal(72,75,76,88)	144,436	4.0%	40,909	3.4%
Government	432,773	12.1%	13,620	0.3%
Total	3,569,377	100.0%	863,098	2.8%

Role of Services: Employment Structure & Growth
IV. Boston Metropolitan Region

Industry	Employment			
	1986		Change 1976-1986	
	No.	Percent Composition	No.	Annual Growth Rate
Agri./Mining	10,823	0.5%	5,054	6.5%
Construction	82,854	3.8%	30,187	4.6%
Manufacturing	400,887	18.3%	51,235	1.4%
Trans/Comm./Pub. Util.	92,453	4.2%	9,866	1.1%
Wholesale Trade	118,027	5.4%	30,584	3.0%
Retail Trade	363,541	16.6%	86,767	2.8%
Finance/Ins./R. E.	161,010	7.4%	55,522	4.3%
Banking (SIC: 60,61)	58,311	2.7%	22,663	5.0%
Securities (62)	15,121	0.7%	8,252	8.2%
Insurance (63,64)	55,570	2.5%	9,432	1.9%
R. E./Other(65,66,67)	32,008	1.5%	15,175	6.6%
Services	665,291	30.4%	239,989	4.6%
Hotel (70)	21,889	1.0%	10,025	6.3%
Health (80)	171,831	7.9%	45,189	3.1%
Educational (82)	102,547	4.7%	24,908	2.8%
Cultural (78,79,84)	18,583	0.8%	4,250	2.6%
Soc./Non-prof. (83,86)	66,794	3.1%	21,098	3.9%
Business (73)	152,949	7.0%	93,721	10.0%
Professional (81,89)	68,287	3.1%	29,836	5.9%
Personal(72,75,76,88)	62,411	2.9%	10,962	2.0%
Government	293,006	13.4%	8,374	0.3%
Total	2,187,892	100.0%	517,578	2.7%

Role of Services: Employment Structure & Growth
V. Boston

Industry	Employment 1986 No.	Employment 1986 Percent Composition	Change 1976-1986 No.	Change 1976-1986 Annual Growth Rate
Agri./Mining	1,352	0.2%	301	2.5%
Construction	14,529	2.3%	-524	-0.4%
Manufacturing	39,676	6.4%	-14,103	-3.0%
Trans/Comm./Pub. Util.	36,553	5.9%	321	0.1%
Wholesale Trade	26,339	4.3%	-5,589	-1.9%
Retail Trade	65,045	10.5%	6,088	1.0%
Finance/Ins./R. E.	89,849	14.5%	23,772	3.1%
Banking (SIC: 60,61)	27,805	4.5%	9,102	4.0%
Securities (62)	14,415	2.3%	7,604	7.8%
Insurance (63,64)	33,216	5.4%	485	0.1%
R. E./Other(65,66,67)	14,413	2.3%	6,582	6.3%
Services	246,238	39.8%	75,534	3.7%
Hotel (70)	10,930	1.8%	3,845	4.4%
Health (80)	71,146	11.5%	13,622	2.1%
Educational (82)	29,423	4.7%	8,237	3.3%
Cultural (78,79,84)	7,672	1.2%	1,272	1.8%
Soc./Non-prof. (83,86)	22,055	3.6%	4,522	2.3%
Business (73)	52,766	8.5%	24,932	6.6%
Professional (81,89)	39,314	6.3%	17,374	6.0%
Personal(72,75,76,88)	12,932	2.1%	1,729	1.4%
Government	99,879	16.1%	11,148	1.2%
Total	619,460	100.0%	96,948	1.7%

VI. Boston's Services Role in Perspective

Industry	Boston's Employment Share, in percent				
	1986			1976	1976-1986
	New England	Massachusetts	Metro Region	Metro Region	Change in Boston's Metro Region Share
Agri./Mining	1.8%	4.3%	12.5%	18.2%	-5.7%
Construction	3.5%	8.3%	17.5%	28.6%	-11.0%
Manufacturing	2.7%	6.3%	9.9%	15.4%	-5.5%
Trans/Comm./Pub. Util.	12.6%	26.0%	39.5%	43.9%	-4.3%
Wholesale Trade	7.3%	14.8%	22.3%	36.5%	-14.2%
Retail Trade	5.1%	10.8%	17.9%	21.3%	-3.4%
Finance/Ins./R. E.	14.9%	32.3%	55.8%	62.6%	-6.8%
Banking (SIC: 60,61)	17.9%	36.4%	47.7%	52.5%	-4.8%
Securities (62)	55.1%	87.5%	95.3%	99.2%	-3.8%
Insurance (63,64)	16.7%	17.1%	59.8%	70.9%	-11.2%
R. E./Other(65,66,67)	6.5%	13.8%	45.0%	46.5%	-1.5%
Services	11.5%	22.4%	37.0%	40.1%	-3.1%
Hotel (70)	13.4%	31.4%	49.9%	59.7%	-9.8%
Health (80)	13.3%	26.4%	41.4%	45.4%	-4.0%
Educational (82)	13.3%	21.7%	28.7%	27.3%	1.4%
Cultural (78,79,84)	8.2%	17.2%	41.3%	44.7%	-3.4%
Soc./Non-prof. (83,86)	11.0%	21.8%	33.0%	38.4%	-5.3%
Business (73)	11.6%	21.5%	34.5%	47.0%	-12.5%
Professional (81,89)	17.1%	31.6%	57.6%	57.1%	0.5%
Personal(72,75,76,88)	4.1%	9.0%	20.7%	21.8%	-1.1%
Government	10.6%	23.1%	34.1%	31.2%	2.9%
Total	8.2%	17.4%	28.3%	31.3%	-3.0%

Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, Washington D.C.

VII. Massachusetts' Role in United States Economy

Industry	Massachusetts' Employment Share, in percent		
	1986	1976	1976-1986
	United States	United States	Change in Massachusetts' United States Share
Agri./Mining	1.4%	1.1%	0.3%
Construction	2.6%	2.1%	0.5%
Manufacturing	3.3%	3.1%	0.1%
Trans/Comm./Pub. Util.	2.4%	2.4%	-0.1%
Wholesale Trade	2.9%	2.8%	0.1%
Retail Trade	2.9%	2.9%	0.0%
Finance/Ins./R. E.	2.9%	2.8%	0.1%
Banking (SIC: 60,61)	3.0%	2.8%	0.1%
Securities (62)	3.5%	3.8%	-0.3%
Insurance (63,64)	8.5%	9.2%	-0.8%
R. E./Other(65,66,67)	2.4%	2.1%	0.3%
Services	3.4%	3.3%	0.1%
Hotel (70)	2.2%	2.1%	0.2%
Health (80)	3.7%	4.1%	-0.4%
Educational (82)	7.6%	7.5%	0.1%
Cultural (78,79,84)	2.7%	2.7%	0.0%
Soc./Non-prof. (83,86)	3.4%	2.8%	0.6%
Business (73)	3.6%	3.2%	0.3%
Professional (81,89)	3.4%	3.4%	0.0%
Personal(72,75,76,88)	2.4%	2.2%	0.2%
Government	2.2%	2.4%	-0.2%
Total	2.9%	2.8%	0.1%

Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, Washington D.C.

VIII. New England's Role in United States Economy

Industry	New England's Employment Share, in percent		
	1986	1976	1976-1986
	United States	United States	Change in New England's United States Share
Agri./Mining	3.5%	2.9%	0.6%
Construction	6.2%	4.9%	1.2%
Manufacturing	7.4%	7.1%	0.3%
Trans/Comm./Pub. Util.	4.9%	4.8%	0.1%
Wholesale Trade	5.9%	5.4%	0.4%
Retail Trade	6.2%	5.9%	0.3%
Finance/Ins./R. E.	6.2%	5.9%	0.3%
Banking (SIC: 60,61)	6.0%	5.6%	0.4%
Securities (62)	5.6%	5.6%	0.0%
Insurance (63,64)	8.7%	8.4%	0.3%
R. E./Other(65,66,67)	5.1%	4.4%	0.6%
Services	6.7%	6.5%	0.2%
Hotel (70)	5.3%	5.0%	0.2%
Health (80)	7.3%	7.8%	-0.6%
Educational (82)	12.4%	12.1%	0.2%
Cultural (78,79,84)	5.7%	5.6%	0.1%
Soc./Non-prof. (83,86)	6.8%	6.1%	0.7%
Business (73)	6.6%	5.9%	0.7%
Professional (81,89)	6.3%	6.0%	0.3%
Personal(72,75,76,88)	5.2%	4.8%	0.4%
Government	4.8%	5.0%	-0.2%
Total	6.2%	5.9%	0.2%

Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, Washington D.C.

IX. Metropolitan Boston's Role in the Massachusetts Economy

Industry	Metropolitan Boston's Employment Share, in percent		
	1986	1976	1976-1986
	Massachusetts	Massachusetts	Change in Metro Boston's Massachusetts Share
Agri./Mining	34.4%	33.6%	0.8%
Construction	47.5%	52.6%	-5.1%
Manufacturing	63.3%	57.7%	5.6%
Trans/Comm./Pub. Util.	65.8%	68.4%	-2.5%
Wholesale Trade	66.1%	63.5%	2.7%
Retail Trade	60.6%	61.5%	-0.9%
Finance/Ins./R. E.	57.9%	61.6%	-3.8%
Banking (SIC: 60,61)	76.2%	71.6%	4.6%
Securities (62)	91.8%	87.8%	4.0%
Insurance (63,64)	68.9%	72.1%	-3.2%
R. E./Other(65,66,67)	30.6%	34.0%	-3.4%
Services	60.5%	62.2%	-1.7%
Hotel (70)	63.0%	53.5%	9.4%
Health (80)	63.8%	64.4%	-0.6%
Educational (82)	75.6%	77.6%	-2.0%
Cultural (78,79,84)	41.6%	45.1%	-3.6%
Soc./Non-prof. (83,86)	66.2%	69.0%	-2.8%
Business (73)	62.3%	63.0%	-0.7%
Professional (81,89)	54.8%	55.2%	-0.3%
Personal(72,75,76,88)	43.2%	49.7%	-6.5%
Government	67.7%	67.9%	-0.2%
Total	61.3%	61.7%	-0.4%

Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, Washington D.C.

APPENDIX B: Relative Wages

Table 1: Average Wages in Massachusetts Counties, 1969, 1976, 1980, 1986 (in constant 1982 dollars)

COUNTY	1969	1976	1980	1986
BARNSTABLE	11,504	12,237	11,988	13,504
BERKSHIRE	13,998	14,751	14,523	15,571
BRISTOL	12,349	12,988	12,877	14,026
DUKES	10,333	10,903	11,029	12,360
ESSEX	13,557	14,588	14,823	16,721
FRANKLIN	12,164	12,995	12,973	13,835
HAMPDEN	13,752	14,647	14,636	15,534
HAMPSHIRE	12,621	13,201	12,480	13,523
MIDDLESEX	15,287	16,501	16,686	19,425
NANTUCKET	11,068	11,826	12,046	14,817
NORFOLK	14,147	15,469	15,749	17,824
PLYMOUTH	12,410	13,518	13,259	14,591
SUFFOLK	15,634	17,707	17,859	20,354
WORCESTER	13,682	14,550	14,523	15,757
US AVERAGE	14,224	15,751	16,235	16,892

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division. "Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Table 2. Average Wage Comparison of Suffolk, Boston Metro with the Rest of Massachusetts and U.S., 1969-1986
(in Constant 1982 Dollars)

Year	Suffolk County	Boston NECMA[1]	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969	15,634	14,882	14,428	11,678	14,357	14,954	11,031	14,224
1970	18,462	15,486	14,943	12,091	14,871	15,369	11,343	14,614
1971	17,168	16,049	15,408	12,365	15,328	15,766	11,658	14,990
1972	17,742	16,549	15,887	12,877	15,805	16,302	12,070	15,501
1973	17,864	16,601	15,942	12,798	15,855	16,392	12,245	15,605
1974	17,593	16,290	15,642	12,626	15,558	16,301	12,316	15,540
1975	17,518	16,091	15,439	12,265	15,346	16,160	12,382	15,437
1976	17,707	18,287	15,637	12,376	15,541	16,465	12,793	15,751
1977	18,012	16,484	15,819	12,599	15,721	16,732	13,037	16,016
1978	17,928	16,480	15,834	12,633	15,736	16,906	13,287	16,210
1979	17,845	16,392	15,750	12,412	15,647	16,907	13,400	16,237
1980	17,859	16,440	15,738	12,206	15,628	16,906	13,354	16,235
1981	17,799	16,491	15,760	12,148	15,646	16,896	13,404	16,241
1982	18,292	16,829	16,040	12,185	15,916	16,972	13,324	16,293
1983	18,718	17,229	18,387	12,284	16,233	17,125	13,292	16,417
1984	19,023	17,553	16,693	12,566	16,556	17,246	13,343	16,534
1985	19,634	18,097	17,157	12,910	17,013	17,422	13,304	16,683
1986	20,354	18,770	17,755	13,568	17,610	17,662	13,324	16,892

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division."Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Footnote: 1 NECMA = New England Consolidated Metropolitan Area - (Norfolk, Suffolk, Middlesex, Essex, and Plymouth Counties)

Table 3. Annual Growth Rate of Average Wage in Suffolk, Boston Metro and the Rest of Massachusetts and U.S., 1969-1986
(in percent)

Year	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969-86	1.6	1.4	1.2	0.8	1.2	1.0	1.1	1.0
1969-76	1.8	1.3	1.2	0.8	1.1	1.4	2.1	1.5
1976-80	0.2	0.2	0.2	-0.3	0.1	0.7	1.1	0.8
1980-83	1.6	1.6	1.3	0.2	1.3	0.4	-0.2	0.4
1983-86	2.8	2.9	2.8	3.4	2.8	1.0	0.0	1.0

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division."Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Table 4. Ratio of Average Wage in Suffolk County, Boston Metro, Rest of Massachusetts, and U.S. to Average Wage in All U.S. Metro Areas, 1969-1986
(U.S. Metro = 1.00)

Year	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969	1.05	1.00	0.96	0.78	0.96	1.00	0.74	0.95
1970	1.07	1.01	0.97	0.79	0.97	1.00	0.74	0.95
1971	1.09	1.02	0.98	0.78	0.97	1.00	0.74	0.95
1972	1.09	1.02	0.97	0.79	0.97	1.00	0.74	0.95
1973	1.09	1.01	0.97	0.78	0.97	1.00	0.75	0.95
1974	1.08	1.00	0.96	0.77	0.95	1.00	0.76	0.95
1975	1.08	1.00	0.96	0.76	0.95	1.00	0.77	0.96
1976	1.08	0.99	0.95	0.75	0.94	1.00	0.78	0.96
1977	1.08	0.99	0.95	0.75	0.94	1.00	0.78	0.96
1978	1.06	0.97	0.94	0.75	0.93	1.00	0.79	0.96
1979	1.06	0.97	0.93	0.73	0.93	1.00	0.79	0.96
1980	1.06	0.97	0.93	0.72	0.92	1.00	0.79	0.96
1981	1.05	0.98	0.93	0.72	0.93	1.00	0.79	0.96
1982	1.08	0.99	0.95	0.72	0.94	1.00	0.79	0.96
1983	1.09	1.01	0.96	0.72	0.95	1.00	0.78	0.96
1984	1.10	1.02	0.97	0.73	0.96	1.00	0.77	0.96
1985	1.13	1.04	0.98	0.74	0.98	1.00	0.76	0.96
1986	1.15	1.06	1.01	0.77	1.00	1.00	0.75	0.96

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division."Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987,unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Table 5. Total Wage and Salary Disbursement in Suffolk County, Boston Metro, Rest of Massachusetts, and the U.S., 1969-1986
(in millions of constant 1982 dollars)

Year	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969	9,030	24,806	34,195	723	34,919	960,906	162,270	1,123,175
1970	9,422	25,782	35,314	753	36,067	987,566	167,760	1,155,326
1971	9,592	26,254	35,837	788	36,625	1,010,939	174,416	1,185,355
1972	9,933	27,541	37,610	845	38,455	1,073,644	186,064	1,259,708
1973	9,866	28,351	38,923	897	39,819	1,128,010	197,469	1,325,478
1974	9,651	27,994	38,421	891	39,312	1,139,686	202,781	1,342,467
1975	9,261	26,778	36,533	862	37,395	1,109,190	201,485	1,310,675
1976	9,305	27,265	37,383	907	38,290	1,157,697	216,916	1,374,613
1977	9,517	28,341	38,810	961	39,771	1,217,709	228,082	1,445,791
1978	9,663	29,630	40,564	1,014	41,578	1,291,117	241,781	1,532,898
1979	9,951	30,650	41,758	1,043	42,802	1,333,792	249,353	1,583,145
1980	10,167	31,417	42,368	1,049	43,417	1,339,914	246,830	1,586,744
1981	10,151	31,749	42,477	1,064	43,541	1,351,643	247,253	1,598,896
1982	10,336	32,289	42,824	1,077	43,901	1,339,230	240,223	1,579,453
1983	10,790	33,983	44,753	1,135	45,888	1,363,958	239,694	1,603,652
1984	11,408	36,853	48,362	1,248	49,610	1,442,102	249,008	1,691,110
1985	11,781	38,920	50,938	1,336	52,272	1,500,980	250,971	1,751,951
1986	12,461	41,119	53,804	1,473	55,278	1,553,701	253,206	1,806,907

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division."Average Wage, Wage and Salary Employment,and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Table 6. Percentage Change in Total Wage and Salary Disbursement in Suffolk County, Boston Metro, Rest of Massachusetts, and the U.S., 1969-1986

Period	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969-76	0.4%	1.4%	1.3%	3.3%	1.3%	2.7%	4.2%	2.9%
1976-80	2.2%	3.6%	3.2%	3.7%	3.2%	3.7%	3.3%	3.7%
1980-83	2.0%	2.7%	1.8%	2.7%	1.9%	0.6%	-1.0%	0.4%
1983-86	2.4%	3.2%	3.1%	4.4%	3.2%	2.2%	0.9%	2.0%

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division."Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Table 7. Area Wage Disbursements as a Percent of Total Disbursements in U.S., 1969-1986
(in percent)

Year	Suffolk County	Boston NECMA	Mass. Metro	Mass. Non-Metro	Mass. Total	U.S. Metro	U.S. Non-Metro	U.S. Total
1969	0.80	1.40	3.04	0.06	3.11	85.55	14.45	100
1970	0.82	1.42	3.06	0.07	3.12	85.48	14.52	100
1971	0.81	1.41	3.02	0.07	3.09	85.29	14.71	100
1972	0.79	1.40	2.99	0.07	3.05	85.23	14.77	100
1973	0.74	1.39	2.94	0.07	3.00	85.10	14.90	100
1974	0.72	1.37	2.86	0.07	2.93	84.89	15.11	100
1975	0.71	1.34	2.79	0.07	2.85	84.63	15.37	100
1976	0.68	1.31	2.72	0.07	2.79	84.22	15.78	100
1977	0.66	1.30	2.68	0.07	2.75	84.22	15.78	100
1978	0.63	1.30	2.65	0.07	2.71	84.23	15.77	100
1979	0.63	1.31	2.64	0.07	2.70	84.25	15.75	100
1980	0.64	1.34	2.67	0.07	2.74	84.44	15.56	100
1981	0.83	1.35	2.68	0.07	2.72	84.54	15.46	100
1982	0.65	1.39	2.71	0.07	2.78	84.79	15.21	100
1983	0.67	1.45	2.79	0.07	2.86	85.05	14.95	100
1984	0.67	1.50	2.86	0.07	2.93	85.28	14.72	100
1985	0.67	1.55	2.91	0.08	2.98	85.67	14.33	100
1986	0.69	1.59	2.98	0.08	3.06	85.99	14.01	100

Source: U.S. Department of Commerce. Bureau of Economic Analysis. Regional Economic Measurement Division. "Average Wage, Wage and Salary Employment, and Total Disbursement Database." December 1987, unpublished. Adapted by the Policy Development and Research Department, Boston Redevelopment Authority.

Table 1. Average Annual Wage by Major Industry, Boston, the Metro Area and the State, 1980-1987

(in Dollars)

City of Boston	1980	1981	1982	1983	1984	1985	1986	1987
All	15,827	17,186	18,811	20,051	21,284	22,721	24,305	26,240
Government								
Federal	20,125	22,854	24,580	25,727	27,232	28,420	28,530	28,981
State	14,990	15,908	18,941	20,063	22,548	24,714	26,214	27,825
Local	20,165	20,212	20,551	21,099	20,023	19,923	20,891	21,682
Private								
Construction	19,938	22,287	25,179	25,918	27,065	28,620	29,529	31,775
Manufacturing	16,740	18,030	19,806	20,747	22,475	24,513	26,232	28,302
Transportation/Comm./Pub. Util.	22,514	24,577	26,678	28,730	28,485	30,219	30,148	32,232
Wholesale Trade	19,191	20,527	22,307	23,232	24,863	27,721	28,752	30,137
Retail Trade	8,910	9,509	9,894	10,559	12,044	11,968	12,954	14,060
Finance	18,396	19,733	21,879	24,507	26,632	28,976	32,191	35,651
Services	13,422	15,056	16,712	17,805	18,982	20,203	21,977	23,745
Boston Metropolitan Area	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**
All	14,800	16,200	17,600	18,700	19,945	21,355	22,808	24,486
Government								
Federal	20,400	22,500	24,000	25,200	25,902	26,862	27,219	27,667
State	14,300	15,300	17,800	18,900	21,409	23,600	25,012	26,749
Local	16,100	17,300	18,300	19,300	19,581	20,324	21,620	22,629
Private								
Construction	18,200	20,195	22,200	23,500	24,186	25,349	26,900	28,807
Manufacturing	18,000	19,700	21,600	23,100	25,755	26,643	28,528	30,263
Transportation/Comm./Pub. Util.	20,000	22,000	23,600	25,350	25,541	26,890	27,175	29,029
Wholesale Trade	19,100	20,600	22,200	23,400	25,122	27,412	28,825	31,066
Retail Trade	8,300	8,900	9,400	10,100	10,973	11,586	12,516	13,615
Finance	16,400	17,700	19,500	21,600	23,380	25,457	27,883	30,551
Services	13,000	14,600	16,100	17,100	17,631	19,449	21,285	22,965
Massachusetts	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**
All	13,800	15,100	16,300	17,343	18,418	19,612	20,909	22,458
Government								
Federal	19,200	21,400	22,900	23,921	24,998	25,687	25,891	26,318
State	14,000	15,000	17,100	18,610	20,937	23,350	24,635	26,535
Local	14,400	15,400	16,500	17,500	18,034	18,981	20,225	21,270
Private								
Construction	16,800	18,600	20,200	21,032	22,096	23,153	24,519	26,611
Manufacturing	16,400	18,000	19,700	21,065	22,580	24,212	25,887	27,337
Transportation/Comm./Pub. Util.	18,700	20,600	22,000	23,424	23,824	25,062	25,507	26,968
Wholesale Trade	18,100	19,400	20,900	22,121	23,748	25,641	27,065	29,325
Retail Trade	7,800	8,400	8,800	9,442	10,155	10,715	11,567	12,630
Finance	15,200	16,500	18,100	19,930	21,422	23,336	25,543	27,913
Services	11,900	13,300	14,600	15,540	16,438	17,640	19,232	20,879

Source: Mass. Department of Employment and Training, ES-202 series.

Table 2. Ratio of Average Annual Wage by Industry, 1980-1987

Boston City to Boston Metro Area

	1980	1981	1982	1983	1984	1985	1986	1987
All Industries	1.07	1.06	1.07	1.07	1.07	1.06	1.07	1.07
Government								
Federal	0.99	1.02	1.02	1.02	1.05	1.06	1.05	1.05
State	1.05	1.04	1.06	1.06	1.05	1.05	1.05	1.04
Local	1.25	1.17	1.12	1.09	1.02	0.98	0.97	0.96
Private								
Construction	1.10	1.10	1.13	1.10	1.12	1.13	1.10	1.10
Manufacturing	0.93	0.92	0.92	0.90	0.87	0.92	0.92	0.94
Transportation/Comm./Pub. Util.	1.13	1.12	1.13	1.13	1.12	1.12	1.11	1.11
Wholesale Trade	1.00	1.00	1.00	0.99	0.99	1.01	1.00	0.97
Retail Trade	1.07	1.07	1.05	1.05	1.10	1.03	1.03	1.03
Finance	1.12	1.11	1.12	1.13	1.14	1.14	1.15	1.17
Services	1.03	1.03	1.04	1.04	1.08	1.04	1.03	1.03

Boston City to Massachusetts

	1980	1981	1982	1983	1984	1985	1986	1987
All Industries	1.15	1.14	1.15	1.16	1.16	1.16	1.16	1.17
Government								
Federal	1.05	1.07	1.07	1.08	1.09	1.11	1.10	1.10
State	1.07	1.06	1.11	1.08	1.08	1.06	1.06	1.05
Local	1.40	1.31	1.25	1.21	1.11	1.05	1.03	1.02
Private								
Construction	1.19	1.20	1.25	1.23	1.22	1.24	1.20	1.19
Manufacturing	1.02	1.00	1.01	0.98	1.00	1.01	1.01	1.04
Transportation/Comm./Pub. Util.	1.20	1.19	1.21	1.23	1.20	1.21	1.18	1.20
Wholesale Trade	1.06	1.06	1.07	1.05	1.05	1.08	1.06	1.03
Retail Trade	1.14	1.13	1.12	1.12	1.19	1.12	1.12	1.11
Finance	1.21	1.20	1.21	1.23	1.24	1.24	1.26	1.28
Services	1.13	1.13	1.14	1.15	1.15	1.15	1.14	1.14

Source: Mass. Department of Employment Training, ES-202 series.

Table 3. Average Annual Wage by Major Industry,
Boston, the Metro Area and the State, 1980-1987

(In Constant 1987 Dollars)

City of Boston	1980	1981	1982	1983	1984	1985	1986	1987
All	22,474	21,998	23,138	23,460	23,838	24,311	25,277	26,240
Government								
Federal	28,578	29,253	30,233	30,101	30,500	30,409	29,671	28,981
State	21,286	20,362	23,297	23,474	25,254	26,444	27,263	27,825
Local	28,634	25,871	25,278	24,686	22,426	21,318	21,727	21,682
Private								
Construction	28,312	28,527	30,970	30,324	30,313	30,623	30,710	31,775
Manufacturing	23,771	23,078	24,361	24,274	25,172	26,229	27,281	28,302
Transportation/Comm./Pub. Util.	31,970	31,459	32,814	33,614	31,903	32,334	31,354	32,232
Wholesale Trade	27,251	26,275	27,438	27,181	27,847	29,661	29,902	30,137
Retail Trade	12,652	12,172	12,170	12,354	13,489	12,806	13,472	14,060
Finance	26,122	25,258	26,911	28,673	29,828	31,004	33,479	35,651
Services	19,059	19,272	20,556	20,832	21,260	21,617	22,856	23,745

Boston Metropolitan Area	1980	1981	1982	1983	1984	1985	1986	1987
All	21,016	20,736	21,648	21,879	22,338	22,850	23,720	24,486
Government								
Federal	28,968	28,800	29,520	29,484	29,010	28,742	28,308	27,667
State	20,306	19,584	21,894	22,113	23,978	25,252	26,012	26,749
Local	22,862	22,144	22,509	22,581	21,931	21,747	22,485	22,629
Private								
Construction	25,844	25,850	27,306	27,495	27,088	27,123	27,976	28,807
Manufacturing	25,560	25,216	26,568	27,027	28,846	28,508	29,669	30,263
Transportation/Comm./Pub. Util.	28,400	28,160	29,028	29,660	28,606	28,772	28,262	29,029
Wholesale Trade	27,122	26,368	27,306	27,378	28,137	29,331	29,978	31,066
Retail Trade	11,786	11,392	11,562	11,817	12,290	12,397	13,017	13,615
Finance	23,288	22,656	23,985	25,272	26,186	27,239	28,998	30,551
Services	18,460	18,688	19,803	20,007	19,747	20,810	22,136	22,965

Massachusetts	1980	1981	1982	1983	1984	1985	1986	1987
All	19,596	19,328	20,049	20,291	20,628	20,985	21,745	22,458
Government								
Federal	27,264	27,392	28,167	27,988	27,998	27,485	26,927	26,318
State	19,880	19,200	21,033	21,774	23,449	24,985	25,620	26,535
Local	20,448	19,712	20,295	20,475	20,198	20,310	21,034	21,270
Private								
Construction	23,856	23,808	24,846	24,607	24,748	24,774	25,500	26,611
Manufacturing	23,288	23,040	24,231	24,646	25,290	25,907	26,922	27,337
Transportation/Comm./Pub. Util.	26,554	26,368	27,060	27,406	26,683	26,816	26,527	26,968
Wholesale Trade	25,702	24,832	25,707	25,882	26,598	27,436	28,148	29,325
Retail Trade	11,076	10,752	10,824	11,047	11,374	11,465	12,030	12,630
Finance	21,584	21,120	22,263	23,318	23,993	24,970	26,565	27,913
Services	16,898	17,024	17,958	18,182	18,411	18,875	20,001	20,879

APPENDIX C: Unemployment Rate

Table 1. Unemployment rate 1970 through 1986 selected years, and latest monthly data, for City of Boston, Metro Boston, Massachusetts, New England, and U.S.

	1970	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986	1986 October	1987 October
Boston (City)	4.9	12.8	9.5	6.5	6.1	7.0	9.1	7.8	5.5	4.5	4.4	3.9	3.2
Boston (Metro)	4.0	10.5	7.8	5.2	5.0	5.7	6.7	5.8	4.1	3.4	3.3	2.9	2.3
Massachusetts	4.6	11.2	8.1	5.5	5.6	6.3	7.9	6.9	4.8	3.9	3.8	3.4	2.7
New England	4.9	10.3	7.6	5.4	5.9	6.3	7.8	6.8	4.9	4.4	3.9	3.3	2.8
United States	4.9	8.5	7.0	5.8	7.1	7.6	9.7	9.6	7.1	7.2	7.0	6.6	5.7

Note: Boston city data are from Massachusetts Division of Employment Security.

Monthly data are not seasonally adjusted.

Sources: U.S. Department of Labor. Bureau of Labor Statistics."News: State and Metropolitan Area Employment and Unemployment, October 1987." December 15, 1987.

Massachusetts Division of Employment Security. Employment Review: October. Forthcoming.

Table 2. Unemployment rate 1980 through 1986 selected years, and latest monthly data, for City of Boston, Metro Boston, other major Metro areas and U.S.

	Annual Averages						
Metropolitan Area	1980	1982	1984	1985	1986	1986 Oct	1987 Oct
Boston	5.2	6.7	4.1	3.4	3.3	3.4	2.7
New York	8.2	8.9	8.1	7.4	6.7	6.3	5.3
Washington, D.C.	5.0	5.8	4.2	3.9	3.9	3.3	3.2
Chicago	8.3	10.6	8.4	8.3	7.4	6.9	5.9
Atlanta	6.0	6.4	4.8	5.0	4.6	4.4	4.4
Dallas/1	4.4	5.7	3.6	4.7	5.7	5.8	5.8
Houston	5.2	6.5	6.7	7.8	10.3	10.5	7.6
Denver/2	5.0	6.6	4.8	5.0	6.6	7.0	5.7
Los Angeles	6.6	9.3	7.9	7.0	6.7	5.9	5.9
San Francisco/3	6.3	8.2	5.3	4.9	4.5	4.3	3.5
City of Boston	6.1	9.1	5.5	4.5	4.4	3.9	3.2
United States	7.1	9.7	7.5	7.2	6.9	6.6	5.7

Notes: 1/ Included Fort Worth area during 1980-1984.
2/ Included Boulder area during 1980-1984.
3/ Included Oakland area during 1980-1984.

Boston city data are from Massachusetts Division of Employment Security.

Monthly data are not seasonally adjusted.

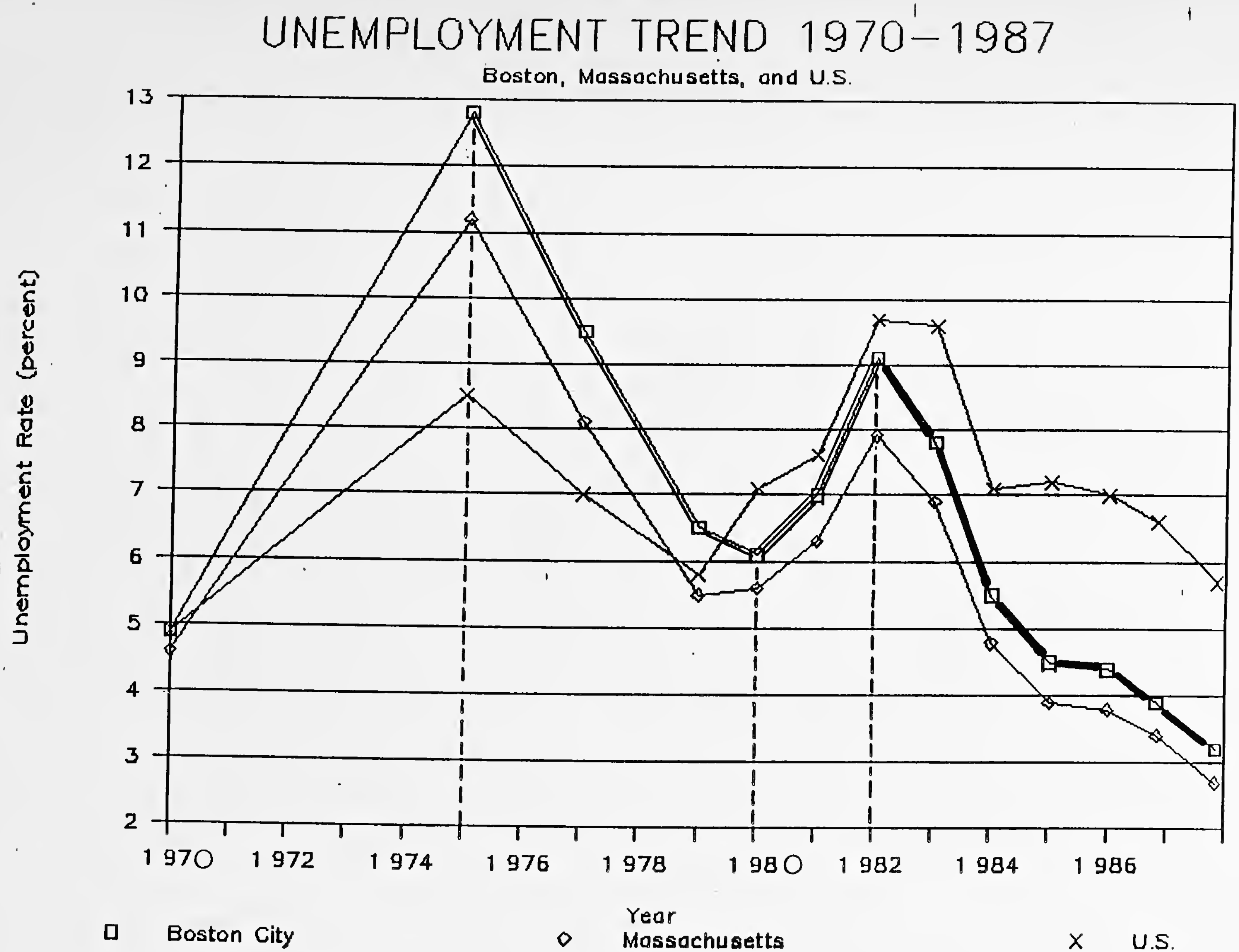
Sources: U.S. Department of Labor. Bureau of Labor Statistics."News: State and Metropolitan Area Employment and Unemployment, October 1987." December 15, 1987, and "Geographic Profile of Employment and Unemployment," various years.
Massachusetts Division of Employment Security. Employment Review: October. Forthcoming.

Table 3. Unemployment rate 1984 through 1986 and latest monthly data, for Largest Metro Areas and U.S.

Metropolitan Area	Annual Average 1984	1985	1986	1986 October	1987 October
Boston	4.1	3.4	3.3	2.9	2.3
New York	8.1	7.4	7.4	6.3	5.3
Philadelphia	6.8	5.9	5.2	4.7	4.5
Baltimore	6.2	5.3	5.2	4.6	4.5
Washington, D.C.	4.2	3.9	3.5	3.3	3.2
Buffalo	8.7	7.3	7.2	6.0	5.5
Pittsburgh	11.3	9.4	8.0	7.1	6.5
Cleveland	8.9	8.3	7.5	7.5	5.2
Cincinnati	8.3	7.2	6.5	6.0	5.5
Columbus	7.8	6.7	6.1	5.9	4.7
Detroit	10.8	9.1	8.2	7.8	7.0
Milwaukee	6.6	6.4	6.1	3.9	3.2
Chicago	8.4	8.3	7.4	6.9	5.9
Indianapolis	7.1	6.1	5.1	4.5	5.0
Minn.-St.Paul	4.7	4.5	4.2	3.6	4.4
St.Louis	8.1	7.4	7.0	7.1	6.1
Kansas City	5.4	4.6	4.6	4.3	5.0
Memphis	7.3	6.6	6.8	6.3	5.4
Nashville	5.5	4.7	4.9	4.4	4.4
Atlanta	4.8	5.0	4.6	4.4	4.4
Jacksonville	5.7	5.2	5.4	5.4	5.0
New Orleans	9.0	11.0	10.9	11.2	9.1
Oklahoma City	5.6	5.8	6.7	6.7	5.2
Dallas	3.6	4.7	5.7	5.8	5.8
Fort Worth-Arlington	4.0	5.0	6.5	6.6	6.0
El Paso	9.7	10.8	11.5	11.5	9.9
Houston	6.7	7.8	10.3	10.5	7.6
San Antonio	4.9	6.0	7.3	7.5	7.3
Denver	4.8	5.0	6.6	7.0	5.7
Phoenix	3.8	5.1	5.6	5.7	4.7
San Diego	6.0	5.3	5.0	5.0	4.7
Los Angeles	7.9	7.0	6.7	5.9	5.9
San Jose	5.3	5.8	5.8	5.5	4.1
San Francisco	5.3	4.9	4.5	4.3	3.5
Seattle	7.9	6.6	6.5	6.2	5.4
United States	7.5	7.2	6.9	6.6	5.7

Source: U.S. Department of Labor. Bureau of Labor Statistics."News: State and Metropolitan Area Employment and Unemployment, October 1987," December 15, 1987, and "Geographic Profile of Employment and Unemployment," various years.

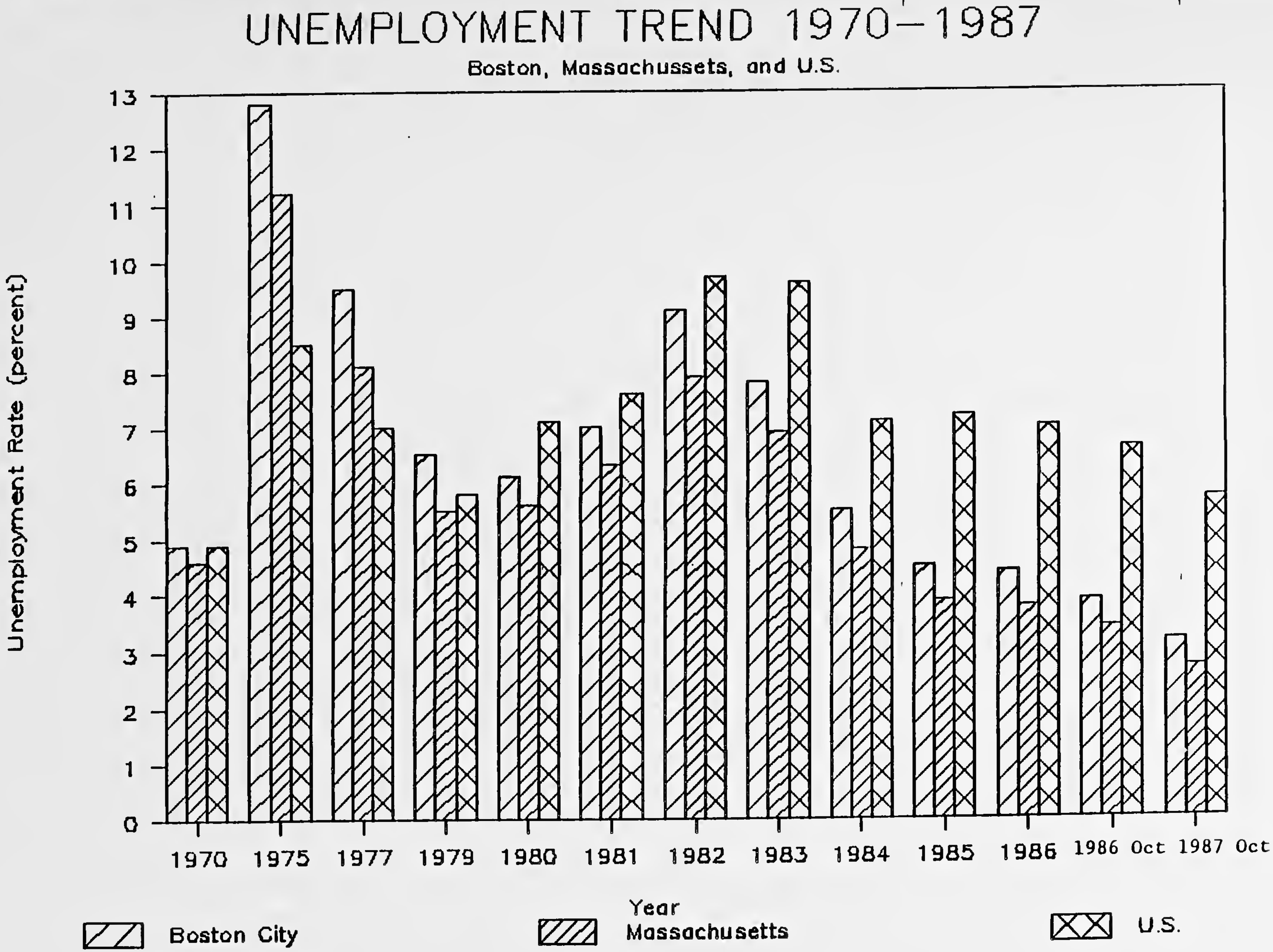
Figure 1



Sources: U.S. Department of Labor. Bureau of Labor Statistics. "News: State and Metropolitan Area Employment and Unemployment, October 1987." December 15, 1987, and "Geographic Profile of Employment and Unemployment," various years.

Massachusetts Division of Employment Security. Employment Review: October. Forthcoming.

Figure 2



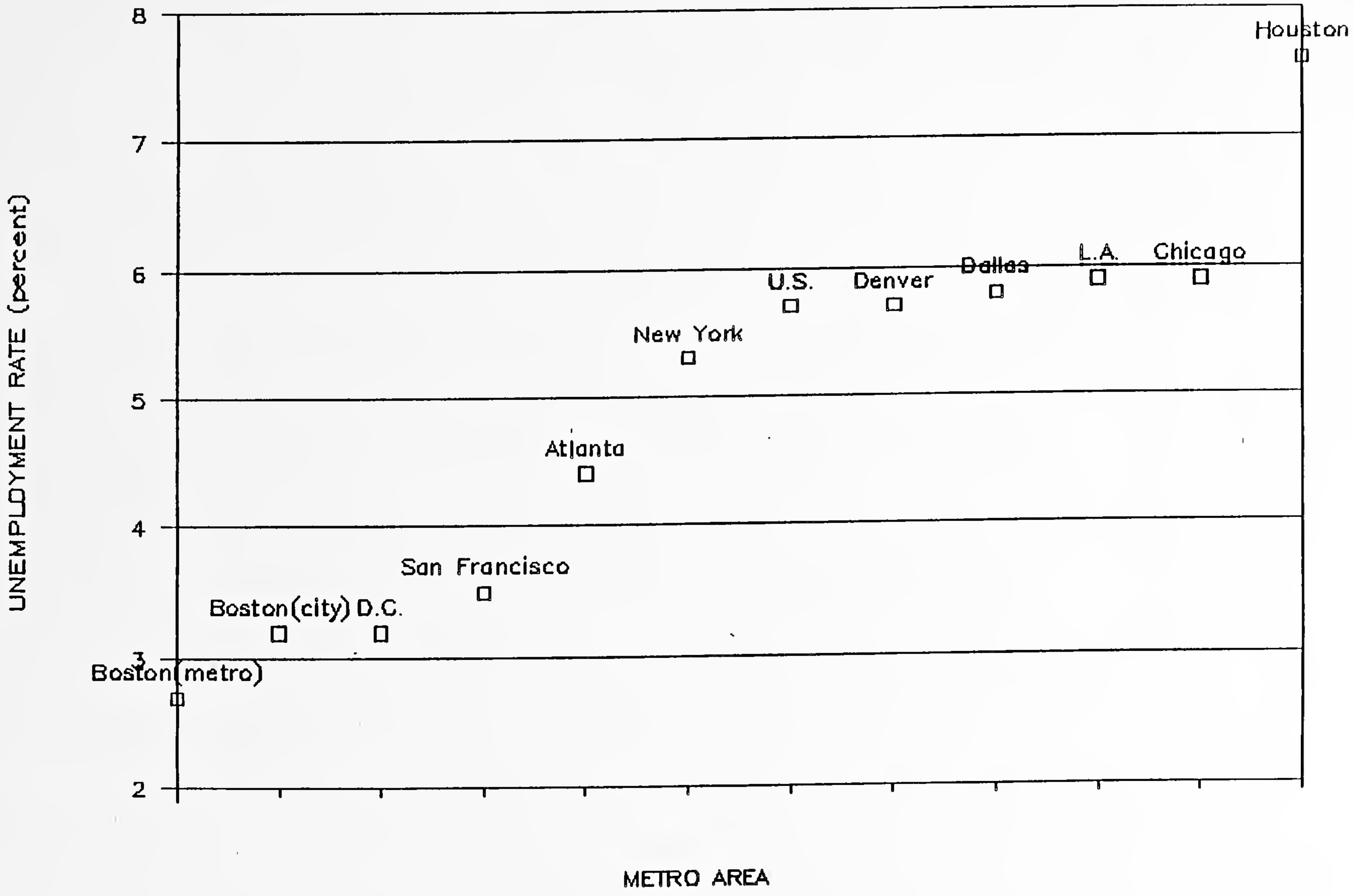
Sources: U.S. Department of Labor. Bureau of Labor Statistics."News: State and Metropolitan Area Employment and Unemployment, October 1987." December 15, 1987.

Massachusetts Division of Employment Security. Employment Review: October. Forthcoming.

Figure 3

UNEMPLOYMENT RATE IN MAJOR METRO AREAS

October 1987



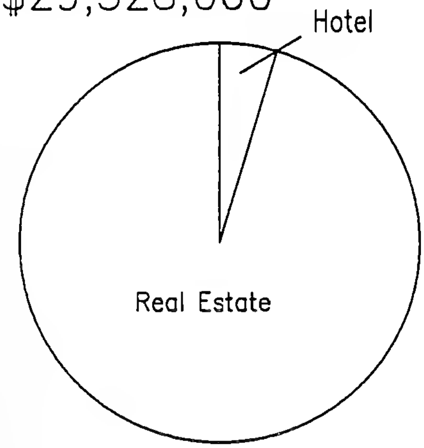
Source: U.S. Department of Labor, Bureau of Labor Statistics."News: State and Metropolitan Area Employment and Unemployment, October 1987," December 15, 1987, and "Geographic Profile of Employment and Unemployment," various years.

APPENDIX D: Tax Yield of Fort Point Channel Development

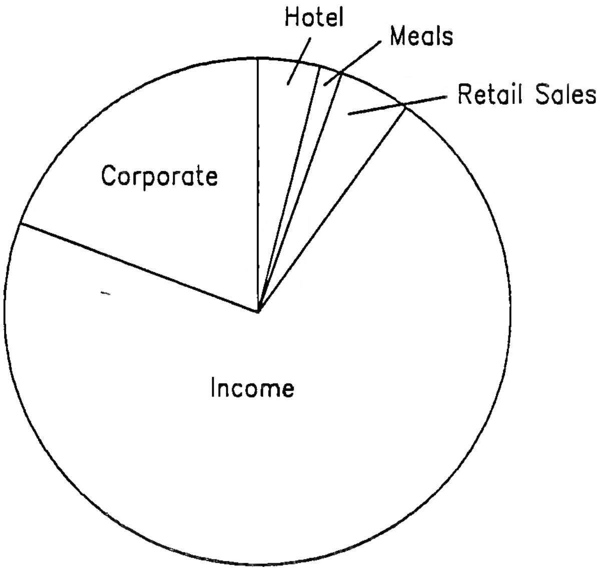
Estimated Tax Yield from Fort Point Channel Development

Proportionate Representation of Taxes to be received annually

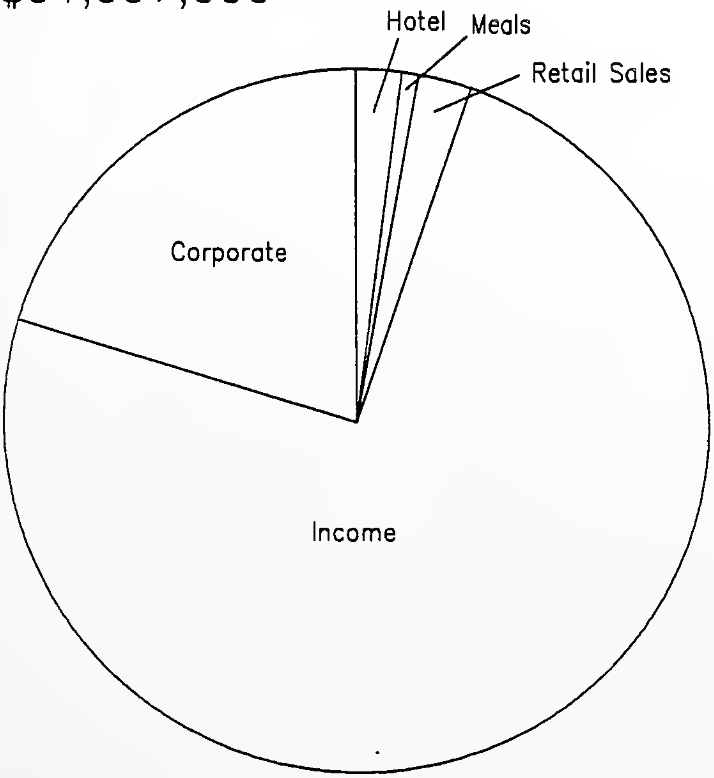
City Total
$29,528,000



State Direct
$48,880,000



State w/Indirect Effect*
$91,997,000



* Includes multiplier effects of economic stimulation

APPENDIX E: Housing

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NEIGHBORHOOD HOUSING TRUST

TOTAL ANTICIPATED PAYMENTS 1990-2003

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** PLEASE NOTE: This table does not include funds contributed through Housing Creation.

YEAR	TOTAL ANTICIPATED PAYMENTS (NOMINAL)	TOTAL IN 1989 $'s (7% Discount)	TOTAL IN 1989 $'s (9% Discount)	TOTAL IN 1989 $'s (11% Discount)	TOTAL IN 1989 $'s (13% Discount)
1990	$1,761,282	$1,637,992	$1,602,767	$1,567,541	$1,532,315
1991	$2,063,172	$1,784,437	$1,708,513	$1,634,239	$1,561,615
1992	$2,063,172	$1,659,527	$1,554,747	$1,454,472	$1,358,605
1993	$2,042,263	$1,527,719	$1,400,481	$1,281,362	$1,170,008
1994	$2,002,256	$1,392,946	$1,249,472	$1,118,072	$997,966
1995	$1,972,824	$1,276,398	$1,120,306	$980,457	$855,468
1996	$1,972,824	$1,187,050	$1,019,479	$872,606	$744,257
1997	$1,676,368	$938,065	$788,316	$659,917	$550,204
1998	$1,072,492	$558,137	$458,951	$375,754	$306,244
1999	$1,070,637	$518,169	$416,923	$333,843	$265,971
2000	$776,011	$349,285	$274,994	$215,356	$167,718
2001	$457,127	$191,352	$147,412	$112,906	$85,954
2002	$319,723	$124,466	$93,824	$70,282	$52,303
2003	$81,875	$29,642	$21,864	$16,018	$11,653
TOTALS	$19,332,026	$13,175,186	$11,858,048	$10,692,825	$9,660,281

LINKAGE UPDATE -- APRIL 25, 1989 (p.1)

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SUMMARY OF LINKAGE COMMITTED TO DATE

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	# OF HOUSING DEVELOPMENTS	TOTAL LINKAGE #'S	TOTAL # OF UNITS	# OF AFFORDABLE UNITS	PERCENT AFFORDABLE
TOTAL HOUSING LINKAGE COMMITTED BY DEVELOPERS (37 DIPs)	N/A	$46,852,225	N/A	N/A	N/A
1987 HOUSING CREATION ROUND I	8	$7,847,608	1,595	1,393	87%
1987 HOUSING CREATION ROUND II	5 *	$8,171,428	284	189	67%
1987 LINKAGE CASH GRANTS	5 *	$1,167,000	200	172	86%
1988 HOUSING CREATION	7	$5,422,500	226	165	73%
1989 LINKAGE CASH GRANTS	3 *	$1,740,820	50	50	100%
1989 HOUSING CREATION	3 *	$3,624,265	125	80	64%
TOTALS	31 *	$27,973,621	2,480	2,049	83%
PERCENT OF TOTAL LINKAGE COMMITTED TO DATE		60%			

* NOTE: Housing developments which have received linkage funds in more than one funding round are listed only once to avoid double-counting.

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HOUSING CREATION STATUS REPORT

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The following affordable housing developments have received committments of linkage money through Housing Creation, and are seeking to make use of the Housing Creation funds:

AFFORDABLE HOUSING DEVELOPMENT	TOTAL # OF UNITS	# OF AFFORDABLE UNITS	TOTAL HOUSING LINKAGE	CONTRIBUTING PROJECT
Lithgow Block	31	16	$1,479,885	101 Arch Street
Brooks School	57	43	$1,616,925	125 High Street
Southwest Crossing/Parcel SWC-2	12	6	$912,500	73 Tremont Street
Old Boston/6-24 East Concord	40	12		
Operation Food/669 Walk Hill	10	10		
Langham Court	84	56	$2,974,610	500 Boylston Street
Parmalee Court	74	49		
Dacia Group Housing	29	29	$2,185,000	150 Federal Street
IBA/640 Tremont	27	18		
Lorne Street Development	60	39	$2,325,000	75-101 Federal Street
Lower Roxbury Tenants Cooperative	70	51		
O'Reilly School	32	32	$445,000	Heritage on the Garden
TOTALS (12 Housing Developments)	526	361	$11,938,920	(7 Contributing Projects)
		69% Affordable		